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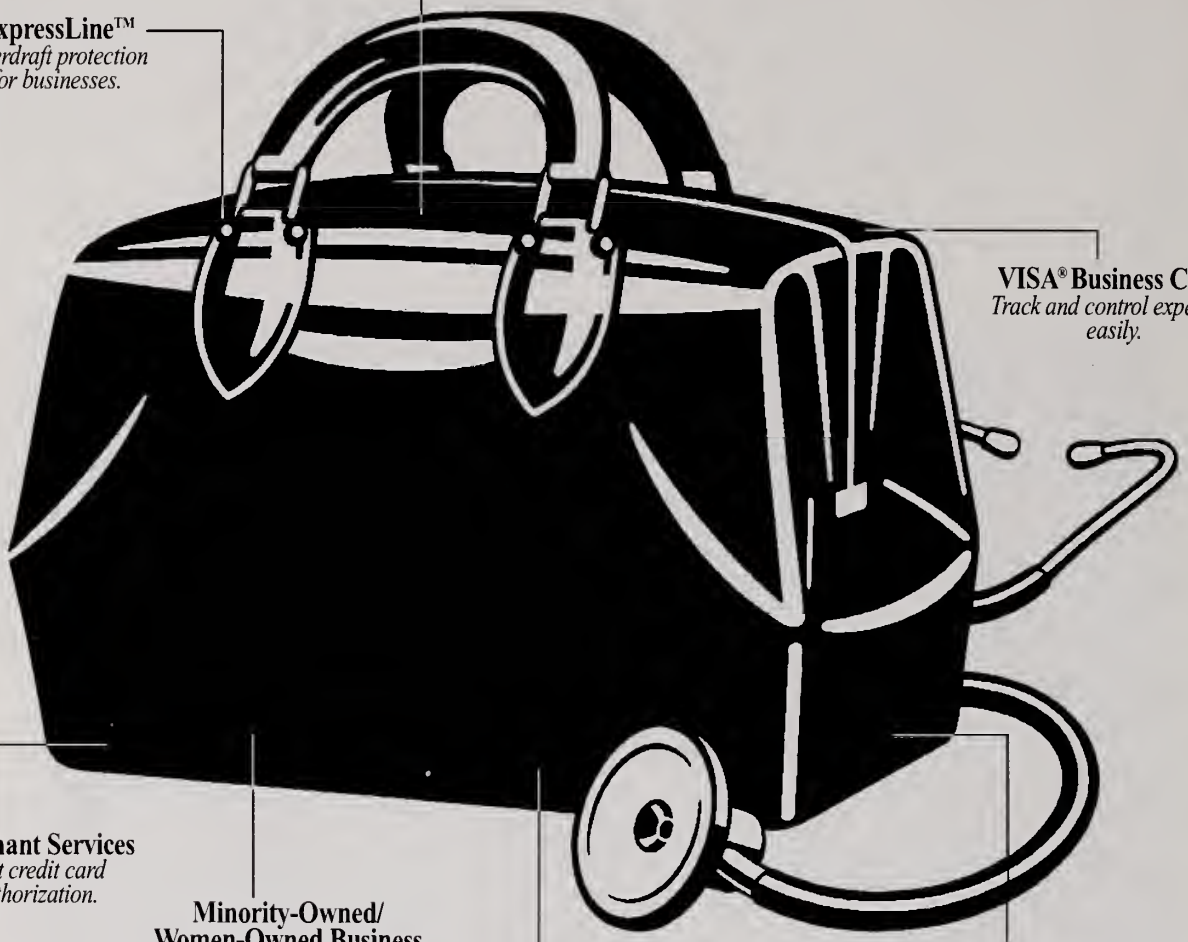


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Hina Oopu

Oopu are freshwater fish. Special traps were made and placed into mountain streams. Such types of fishing was often done by women.

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Editorial

Norman Goldstein MD

The Peer Review Process

Many physicians spend a great deal of time reviewing manuscripts sent to them by the *Journal* editor, and also responding to the reviewer's criticisms of their own papers. The editor and guest editors of our special issues also spend countless hours, indeed days, fine tuning the process of manuscript peer review.

As Drummond Rennie MD, Deputy Editor (West) of *JAMA* noted, peer review educates everyone concerned and is comforting to editors and to the scientific community, who believe that it tends to make what seems to be an arbitrary process more democratic.[1]

The AMA sponsored two congresses on peer review in biomedical publications in 1989 and 1993. "Peering into Peer Review"[2] summarized the conferences attended by editors and authors. Opponents attacked peer review for its secretiveness—the obliteration of names, titles and institutions of reviewers. Some also said the process invited abuse by ignorant, unfair, or malicious reviewers who could steal ideas and words, who may break confidentiality, and who might deliberately delay publication. Even critical peer review cannot guarantee the absolute correctness, authority, or eventual importance of any manuscript.

Proponents, and the majority of those who attended both congresses, were strongly in favor of continued and more critical peer review. Research presented at the 1993 congress emphasized that authors, readers, and peer reviewers could benefit from spending more time and energy learning how to review articles critically and objectively.

JAMA had 2,927 peer reviewers in 1992.[3] It required five full pages in the *Annals of Internal Medicine* to list the almost 2,000 peer reviewers in 1993.[4] Fortunately for the editor of the *Journal* and our staff, we are not in the same league as *JAMA* and *Annals*, nor would we ever aspire to be.

But thanks to our 157 peer reviewers—authorities in every branch of medicine from adolescent medicine to workers' compensation and family practice, we have attempted to be fair, honest, and expeditious in our evaluation and publication of all manuscripts.

My sincere thanks to our peer review panel.

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4. *Ann Int Med.* 119;1227-1231.

If you have the* HMJ *November 1995 issue that you aren't using, we would love to have them! Please bring them to the* HMA *reception desk. Thank you.

We extend our deepest appreciation to all the peer review volunteers who have contributed to the *Journal* making it what it is today.

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HMA President's Message

Carl W. Lehman MD

Medicare and Medicaid are entitlement programs that are of great concern to congressional leaders. In both programs, the numbers of beneficiaries and benefits are outstripping the money budgeted, with the grave possibility they will be bankrupt in a few years.

One significant problem that will affect the Medicare program is the projected marked increase of beneficiaries—the baby boomers—the 76 million persons who were born between 1946 and 1964. These individuals are just turning 50, and they will markedly affect the Medicare program in the next 15 to 35 years. The life expectancy of men is now 81 and women 85. Most likely the baby boomers born in 1960 will not received Social Security benefits until they're 67 years old. Today 33.4 million Americans are 65 years and older compared to the projected 59.4 million who will be 65 in 2030. Today those who are over 85 is about 3.5 million compared to the projected 5.8 million who will be 85 in 2035.

The boomers will be the first long-lived generation, the first to really get a taste of mass longevity. Boomers increasingly are splitting into two groups: the *haves* who tend to come from two-salary households with college degrees, and the *have nots*, the 45% with a high school diploma or less. About three-fourths of boomer women are in the labor force and will more than likely have their own pensions, as compared to their stay-at-home mothers. Unfortunately, the have nots, who will head toward retirement with low-wage jobs, low pensions, little or no health coverage, and minimal financial security by way of savings and home equity, will experience a gloomier picture. Today four workers support one Medicare patient, and by 2030 this ratio will be two to one.

If the Medicare program is to be preserved, a marked change in addressing Medicare issues must occur.

I agree with Dr Richard R. Kelley who recently wrote that during the past decade the power to make decisions about the delivery of health care has become more and more concentrated in the hands of bureaucrats and corporate executives who have become the *customer* and consumers seeking health care are told which doctors they can see, what services they can have, and when they can leave a hospital. Citizens should be allowed to receive health care funds tax free. Medicare and general health care reform should include this provision which would allow both employees and retirees to set up tax-free health care savings funds and buy health care insurance and/or health care directly from providers. The marketplace will rule as smart comsumers seek the best services. The reverse is happening now. Government bureaucrats and corporate accountants select health care providers, dictate fees, services, and availability. Health maintenance organizations are slashing fees paid to doctors, and hospitals are refusing to do business with those who will not abide by the reduced payment schedules and reduced services offered to patients.

In order to control the appropriate use of Medicare benefits, the system must reward those who do not waste or demand overuse of the system.

The use of medical savings accounts for Medicare recipients is one suggested option. All appropriate and necessary care would be provided and futile activities would be eliminated. Management costs must be minimized, thereby allowing maximal funds for patient care.

Medical School Hotline

The Role of Speech-Language Pathologists and Audiologists in Medicine

James Yates PhD, Professor and Chair
Division of Speech Pathology and Audiology
John A. Burns School of Medicine

The role of the speech-language pathologist and audiologist in medicine is evolving at a pace comparable to that of the health care system in general. The professions are responding to internal and external demands for increased efficiency and effectiveness. Over the past few decades, speech-language pathologists and audiologists have grown from peripheral contributors of health care to the principal source of diagnostic, evaluation, and (re)habilitation services for speech-language-hearing-related disabilities.

Historically, speech-language pathologists and audiologists have enjoyed at least three roles in health care delivery:

- Early audiologists and speech-language pathologists served as allied health practitioners, generally in hospitals or office practices, working under general medical supervision, sometimes by prescription. This role is diminishing rapidly.
- Speech-language pathologists and audiologists became established as the primary experts in issues specific to speech-language-hearing disorders and their nonmedical diagnoses, evaluation, and treatment.
- They became the referral resource for diagnosis, management, and treatment of speech-language disorders (speech-language pathologists) and for the diagnosis, evaluation, and treatment of hearing disorders (audiologists).

The evolution has been driven by advances in medicine in general, the qualitative improvement of services provided by speech-language pathologists and audiologists, and vastly increased consumer awareness and demand.

Advances in medicine and health care have resulted in more medical survivors including:

- Greatly reduced infant mortality with an unfortunate side effect of increasing the numbers of children requiring intervention for speech-language-hearing disorders.
- Higher survival rates in accident and injury with residual speech-language-hearing and balance disturbances.
- Increased realization of full life expectancy in the country in general and Hawaii in specific along with the maturation of the baby boomers. The extended longevity in our population has vastly increased the demand for services to the geriatric population.

Infants and children may evidence delayed development of speech and language, stuttering and, less frequently, voice disorders. Middle ear disorders are common in the early years and have significant impact on language development. The incidence of hearing loss due to nerve damage in children and teenagers is increasing after two decades of decline. Ninety percent of children diagnosed with learning disabilities have language disorders.

Adults and young adults with speech-language-hearing disorders are at risk of social, emotional, intellectual, and economic impairment in an expanding technology-driven world. Adequate language and communication ability are a necessity.

Adult-acquired speech-language disorders range from voice disorders from vocal abuse or irritants to speech-language deficits

related to hearing loss and partial or complete loss of expressive and/or receptive language in stroke or traumatic brain injury. Tens of millions of adults have disorders of hearing and the losses tend to be progressive with age.

In the geriatric population, language and hearing disorders predominate .with severity often related directly to general health, social and intellectual function, and independence.

The program in speech pathology and audiology at the John A. Burns School of Medicine is an active participant in the efforts to adapt the delivery of services in speech-language-hearing to today's and tomorrow's health care needs. Part of that effort is to help define and model a system that assures availability, access, and quality of services at the earliest possible moment.

Today we are seeing our roles evolve in support of health care initiatives. Speech-language pathologists and audiologists not only provide independent diagnostic, evaluation, and treatment services, but are becoming consultants in speech-language-hearing. This new role extends the services of the referring party. Speech-language pathologists and audiologists provide the managing physician with diagnostic and evaluative information of value in decision making and preparing treatment plans.

Military Medicine

The Evil Empire Revisited
Operation Provide Hope VI
MAJ Brian Crisp MD

After the fall of the Soviet Union and its subsequent dissolution, U.S. Vice President Al Gore and Russian Prime Minister Viktor Chernomyrdin met and agreed to specific methods by which the U.S. could aid the struggling new nation. Pursuant to and as part of this agreement, the U.S. Army, Pacific (USARPAC) was asked to deliver excess Army medical materiel (in essence, a now obsolete but never used field hospital) to City Hospital No 2 in Vladivostok, Russia, located on the Sea of Japan. This previously *closed* city was considered so secret and of such vital military importance that even bona fide Soviet citizens had to apply for a special permit to visit friends or family members residing there.

The mission was comprised of three phases. In the first phase, team members of the ad hoc Medical Logistics Support Team, or MLST, met at Sagami Army Depot in Japan (where the field hospital was stored) for initial planning. Personnel for this phase from Tripler Army Medical Center included staff family physician MAJ Gary Clark and dentist CPT Chris Evanov. They were met by a host of biomedical repairmen, logistical, supply and engineering specialists, and linguists who were drawn from as far away as Pennsylvania and as close as Camp Zama, Japan. Following the initial planning meeting in Japan, the members traveled to Vladivostok where they inspected City Hospital No 2 and made final plans as to what to bring, where to place it, and how it could best be used. While there, they discovered another hospital in need of American help, the Children's Tuberculosis Hospital. This hospital looks after some of the poorest of Vladivostok's children; kids who not only have TB, but who are typically from unhappy homes—often riddled with alcoholism, neglect, and abuse. These children usually live in the TB Hospital for up to a year and a half while undergoing treatment, in conditions that would bring tears to most adults—as it did to most of our team. After assessing the two hospitals, the team returned to Japan where much of the equipment that would be sent was located—this completed phase I. Phase II consisted of uncrating, inspecting, testing, and repacking all medical equipment to be shipped to Russia. Sixty-two containers of this medical equipment were then loaded onto a cargo ship and transported to Vostochny, the civilian port about two hours north of Vladivostok.

After the equipment arrived, Phase III began: installation, assembly, and use of the donated supplies. On a team of 33, 11 Tripler personnel went to Russia for this phase, including optometrist CPT Patricia Hill, Dr Evanov, and me. The remainder of the team was logistical, biomedical, engineering, laboratory, x-ray, respiratory, and operating-room specialists. As the only physician on the mission, my job was to act as medical advisor and guide. Additionally, I was assigned the responsibility of medical education; that is, I was in charge of the overall hands-on instruction, written instruction, and videotaping of selected medical equipment. And, I was the medical support for our team members in case of illness or injury.

After an overnight stay in Tokyo, I arrived in Vladivostok via Aeroflot—on an aircraft replete with smelly chairs, bad food, and gum on the carpet that sticks to the bottom of your shoes. This was especially poignant after flying out of Tokyo's Haneda airport (probably the cleanest airport in the world), and Toyama airport on Japan's western coast (the second cleanest). Just like the old movies, I was pulled out of a line of passengers when I showed the immigration officers my official American passport and was forced to wait an additional half-hour until I was cleared, ostensibly from Moscow. Old habits die hard.

After getting settled in our home-away-from-home for the next six and a half weeks, I toured the hospital and had a chance to see its operating rooms, intensive care unit, pediatric service, and the various wards. I also viewed the ancillary services, such as x-ray, physical therapy, dentistry, laboratory, and the morgue (a hideous place—right out of your worst childhood nightmares). We quickly went to work locating equipment (one of the hardest jobs), then assembling, checking, rechecking, and finally instructing our Russian counterparts in their use. We also translated instructions into Russian to be attached to the various pieces of equipment. All manner of obstacles were encountered, from the Russian professor who "had 20 years of medical education and could *certainly* put together a bed" (he put it together backward), to various Russian nurses and doctors hoarding equipment they had absolutely no use for, to oxygen wall flow rates that were inappropriately low for some of our anesthesia equipment and precluded their use. The bigger pieces of equipment, such as x-ray or laboratory pieces, were easily distributed to the appropriate personnel, but it was much more difficult for some of the smaller supplies. What would typically transpire was that one or more of the team members would open a *multi-pack*, a roughly 6 x 6 x4-foot container containing a multitude of almost every medical product available. A gaggle of about 8 to 10 Russian nurses and physicians would gather around and *claim* each piece as it was presented and interpreted by the interpreter. As one might expect, however, some medical items defy translation, eg, how do you say "Kirschner wires" or "cerebella support" in Russian? Many boxes had to be opened by the Russian personnel and visually inspected to determine their appropriate destination. After that, piles of equipment would be loaded onto antiquated gurneys and wheeled, we hope, to the right location.

One way or another, the equipment made its way to the appropriate department and was installed. The Russians were instructed in its use and even starred in the instructional videos. Late nights and working weekends saw to it that all translations were completed

before our departure—not a simple task considering the technical nature of medical translation. Through it all, the team worked well together, and our Russian hosts were gracious and helpful. Despite the busy schedule, I was able to scrub in on a laparotomy for peritonitis, confer with their intensivist on several of their cases in the ICU, watch respiratory therapy in the pediatric ward (where several kids in a row used the same nebulizer solution, hose, and mouth piece), and in general observe the day-to-day functioning of this trauma hospital. Vladivostok is a poor, increasingly crime-ridden Mafia-infested town, and many of the cases we saw were related to violence from organized crime or from hitherto unknown poverty. It is sad to think that in some ways the medical needs of the population were better met under the old communist system.

As for our team's health, I was probably overly prepared for calamity, as I didn't use even a fair amount of the medications I brought with me. This was in part due to the so-called Western conditions at the hotel were we stayed, and in part due to the appropriate caution exercised by the team. Safety was constantly emphasized—an important point as the Russians did many things with few or no safety precautions. Our soldiers were advised to let our host nation assistants perform dangerous or unsafe activities. No evacuations were necessary, but could have been arranged if necessary. There was only one trauma—a hand laceration that did not require stitches, and the most worrisome patient was a soldier with new-onset headaches which ultimately resolved but did require short-term narcotics. None of my patients required host nation medical systems, and none required more than I was able to deliver. Certainly, it could have been much worse.

Overall, the mission was a success. An entire Army field hospital with an estimated value of more than $4 million (last valued in 1970—probably worth about twice that in 1990's dollars) was transported and integrated into a Russian trauma hospital with only minor problems. News of the mission was broadcast on several local radio and television stations and made headlines in the local Vladivostok newspapers. We had insight into a Russia that, while rejuvenating, seems to be crumbling even faster. The Russian medical staff is trying to hold together a system that is constantly doing its best to fall apart. No supplies, no money, intermittent electricity, low salaries, and a nonexistent infrastructure all make for a system that is precarious at best. We marvel at the courage and dedication of the professionals who do their best for the sick and injured needing their care in such a system. Boy, do we have it good here!

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Medical Insurance Claims as a Source of Data for Research: Accuracy of Diagnostic Coding

Robert M. Worth MD, PhD*, Robert E. Mytinger DrPH**

Validation of diagnostic codes in a sample of Hawaii medical insurance claims in 1986 to 1987 revealed 96% accuracy in hospital claims, high enough to supply data for research purposes. In physician claims the accuracy was only 62%. Initiation of two feedback loops to physicians from the insurer in 1989 resulted in a marked improvement of diagnostic coding accuracy by 1992 to 1994.

Introduction

Because of the high cost of generating original data, health service researchers often seek reliable secondary data for their studies. One appealing source of secondary data is claims submitted by hospitals and physicians to health insurance plans. Such claims typically contain encounter-specific information pertaining to procedures and other services provided to patients, to charges for such services, and to primary and secondary diagnoses. These variables, coupled with others descriptive of the patient and provider, form a potentially valuable resource with which to examine many questions pertinent to the delivery of health services. Questions of claims data accuracy have become important locally because of a major claims-based research data base developed to support health services research in Hawaii.

Pretest

During 1987 planning began for establishing a continuing archive of abstracts of medical insurance claims processed by the Hawaii Medical Service Association (HMSA). After receiving the approval of the Hawaii Medical Association, a cooperative effort was begun by HMSA, the Hawaii Department of Health (DOH), the Department of Human Services (DHS), and the U.S. Centers for Disease Control (CDC). The archival file, which is maintained by the DOH, has accrued data weekly from HMSA since late 1989. This data base is rigorously controlled, with access limited to qualified investigators seeking specific data elements for studies of substantial merit. To assure complete confidentiality, it contains no data by which the identity of individual patients or providers can be discerned by the researcher.

Of special concern has been the accuracy of the diagnostic data contained in claims submitted, so a pretest was done to validate the accuracy of the primary diagnostic codes being submitted by hospitals and physicians. This began by identifying medical insurance claims processed at HMSA between July 1986 and June 1987 which contained primary diagnostic codes (ICD9-CM) that matched a CDC-derived list of codes thought to be of surveillance interest. The 169,586 claims thus identified served as a sampling frame for a random sample (stratified by patient age and gender) of 186 claims for validation of the primary diagnostic code. With approval of the Hawaii Medical Association, an explanation of the project and a coding sheet were provided in the fall of 1987 to each hospital and physician's office that had originally submitted a sampled claim, together with a request for verification of the diagnosis on that hospital or physician claim.

Response to these requests was excellent. Hospital claims (N=47) reflected a very high level of accuracy, with only two hospital claims (4%) revealing coding errors, both typographical (Fig 1). While the blind re-coding of 38% of hospital claims did not reflect precisely the original codes, these represented *unprecise codes*, due almost exclusively to selection at the time of re-coding of another closely related condition as the *primary diagnosis*. These unprecise codes appeared to be largely for patients who had been admitted for several interrelated chronic problems. It is important to note that this validation study was performed on claims submitted prior to the mandated use of diagnostic-related group (DRG) hospital coding, which tends to minimize this problem. The remaining 57% of the re-coded hospital claims were identical with the diagnostic code originally submitted to HMSA. Hence, hospital-reported diagnoses appeared to be quite dependable for research purposes, probably reflecting a high level of training of hospital record room staff for diagnostic coding.

Physician-generated claims revealed a different picture, probably because the clerical staff in physician offices or billing service bureaus is less well-trained. Twelve percent of office claims appeared to have single digit typographical errors. Another 8% represented confusion of medical terminology. For example, a patient with *multiple myeloma* coded on the claim was changed to *malignant melanoma* on validation. Another class of errors in 17% of the office claims arose from coding a potential infectious disease instead of the exposure to that disease. For example, validation

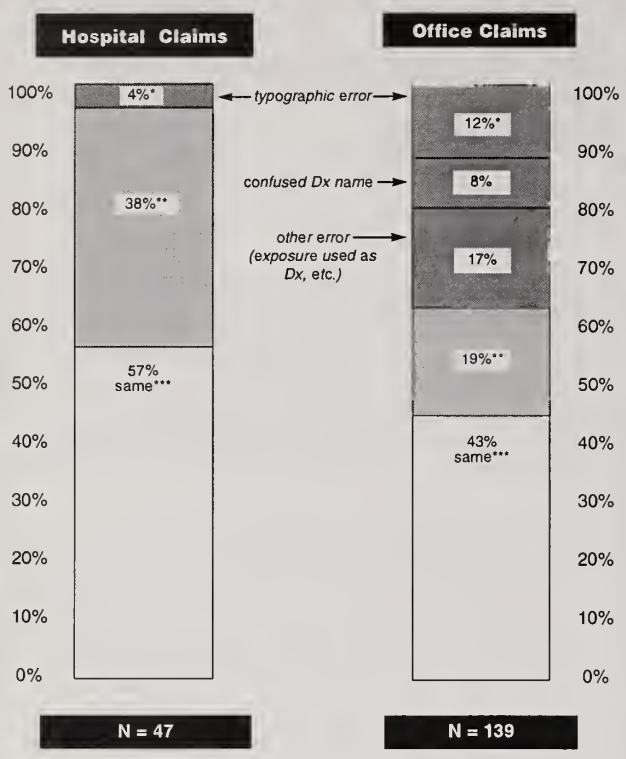
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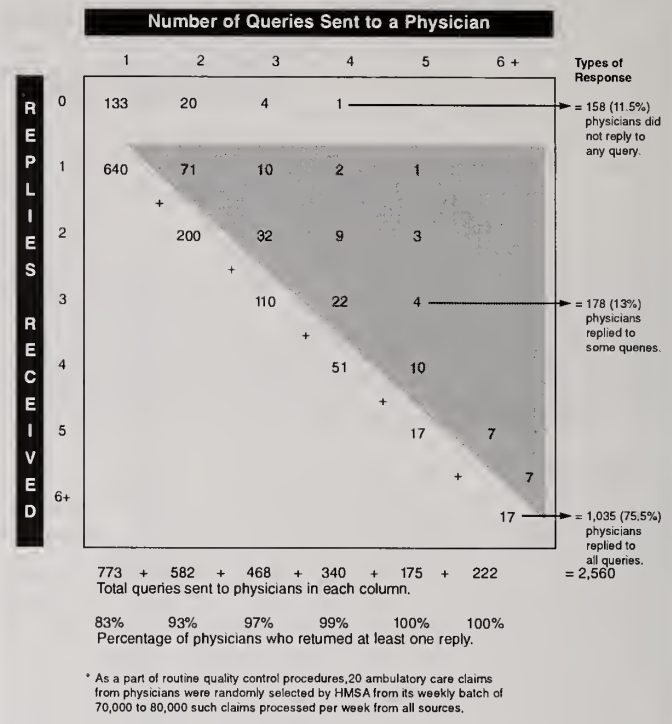
A project supported in part by George F. Straub Trust, Hawaii Community Foundation, through the Pacific Health Research Institute; also supported by the HMSA Foundation.

Fig 1.—Diagnostic Coding Replicability of Insurance Claim Forms Versus Blind Re-coding of Medical Record Abstracts, HMSA, 1986 to 1987.



* Abstracts re-coded into diagnosis unrelated to originally submitted Dx code.
** Unprecise codes — closely related diagnosis or symptom, or "Rule-Out" condition.
*** Re-Coding identical to originally submitted Dx code.

Table 1.—Distribution of 1,371 Hawaii physicians whose HMSA medical insurance claims were randomly queried during January 1992 to July 1994 for verification of the principal diagnostic code by number of replies received.*



* As a part of routine quality control procedures,20 ambulatory care claims from physicians were randomly selected by HMSA from its weekly batch of 70,000 to 80,000 such claims processed per week from all sources.

revealed that *dog-bite of the hand* had originally been coded as *rabies* (in a rabies-free state!). The selection of another related diagnosis from among several problems in the patient (eg, the *unprecise coding* category) was present in 19% of the office claims sampled. Thus, only 43% of the physician office claims were validated as having codes identical to the original code.

Since physician office claims represent the lion's share of the planned archival data base, a diagnostic accuracy rate (even stretching the point) of 62% made their utility for research purposes clearly questionable.

Methods — Interventions

It was, therefore, decided to introduce two actions, each of which might improve the accuracy of diagnostic coding. The first was to broaden the system already in use by all claims processors, namely to query claims with improbable diagnoses. For example, age/gender algorithms already in place will flag a claim for a male with a diagnosis coded as *endometriosis*. A claim thus flagged is queried, with payment deferred until an explanation or a correction is received. Because of frequent coding problems found with infectious diseases in the preliminary study, the DOH provided HMSA with a list of infectious diseases very unlikely to be treated in Hawaii (cholera, poliomyelitis, rabies, African sleeping sickness, etc). These were then added to the flagging algorithms already used at HMSA.

A second action to track coding errors caused by flaws in staff training was instituted in 1991. This entailed the selection of a small random sample (about 20 queries a week) of medical office claims that had cleared the routine claims processing algorithms (see above). A form letter was sent from HMSA each week to each of the 20 sampled physicians. They were asked for verification of the accuracy of the diagnosis found on the specified claim recently submitted to HMSA. The accompanying worksheet contained the patient's name and birthdate, date of service, the ICD code of the submitted primary diagnosis, and a brief text of that code. The physician was asked either to confirm via the supplied self-addressed, postage-paid envelope that the diagnosis on the claim was correct, or to enter the correct diagnosis. The intent of this measure was to bring to the attention of physicians that elements on the claim are being monitored for accuracy. It was hypothesized that upon discovering coding errors, physicians will take steps to prevent their repetition by the office or service bureau staff responsible.

Results — Infectious disease flagging

A test run with the expanded infectious disease flagging system in early 1989 immediately identified several coding errors. The most spectacular was a pseudo-outbreak of about 20 cases of anthrax judging from claims coded 022 emanating from the office of one obstetrician. The last verified human or animal case of anthrax in Hawaii was reported shortly before World War I! When queried by

HMSA, it was discovered that the billing clerk in that office was unaware of the difference between 022 and the code V22, which indicates a normal pregnancy. The offer by HMSA to assist in additional training of that clerk was happily accepted, and the anthrax epidemic quickly subsided. Other clusters of coding errors, partly from lack of training and partly from typographical errors, were discovered in this fashion and were amicably resolved.

Results — Random queries

Table 1 reveals the distribution of random queries sent to a sample of 1,371 Hawaii physicians between January 1992 and July1994. The 1,213 physicians who responded to some or all of the queries include a majority of physicians in active fee-for-service private practice in Hawaii. This response rate was unusually robust, with only 158 (11.5%) of the queried physicians failing to reply to any coding query sent. Most of the non-respondents had received only one or two queries during the 31-month study period. Another 178 physicians (13%) responded inconsistently, but the receipt by a physician of five or more queries invariably elicited at least one reply. The vast majority (84%) of these *inconsistent* responders failed to reply to only one of the queries sent, while responding to the rest. The remaining 1,035 physicians (75.5%) replied to all queries received, a truly remarkable level of cooperation.

Table 2 displays a response rate ranging between 79% and 86% from initial queries sent to physicians who had not previously been randomly selected, showing no trend over time. The number of physicians still available to receive their first query is steadily decreasing as time goes by. The response rate (84%) for those who received two or more queries was in the same range as for those who received their first query.

Compared to the low levels of coding accuracy previously found in claims from physicians (Fig 1), the results shown in Table 3 suggest a large improvement, with 94% now being validated as correct. The unprecise coding category is now down to about 6%, leaving less than 1% with a typographical or other obvious coding error.

Discussion

The remarkable improvement in medical office diagnostic coding accuracy helps to validate the utility of medical claims information for research purposes in Hawaii. The reasons for the great improvement are less clear. What is apparent is the simple act of calling coding errors to the attention of physicians, whether by claims flagging and subsequent inquiry, or by routine random sampling and verification, seems to have the desired effect of heightening attention to accuracy in claims.

Of importance to investigators who use diagnostic data from insurance claims is our experience with unprecise codes. Many claims reflect medical services provided to persons with chronic conditions. This usually means that the attending physician is dealing with multiple co-morbidities. At one encounter, the physician may properly report diagnosis A as primary, and for the same patient on a subsequent encounter may report diagnosis B (or C or D) as primary. And each could be accurate. Thus, investigators working with diagnostic data from insurance claims files must view *all* the diagnoses found in a sequence of claims in order to see the context of the disease or condition being studied. Only then can they properly accommodate shifting diagnoses for the same patient.

Acknowledgments

We owe a debt of gratitude to the early support of the Centers for Disease Control and Prevention, particularly Drs Steven Blount and Ben Truman. We wish to express our gratitude for the ongoing assistance provided by Yeiso Arakaki of HMSA and Jim Cooper of the DOH in carrying out these trials.

We especially are grateful to the 1,213 Hawaii physicians who responded to the queries during the past three years, without whom all would be for naught.

Table 2.—Response rates to 2,560 coding queries for verification of the Principal Diagnostic Code by physicians in Hawaii during January 1992 to July 1994, by year of request and by initial query versus subsequent queries.

	Year of the Initial Query to a Physician				All Subsequent Queries
	1992 Queries	1993	1994 (Jan-July)	All Init	
Number of Queries Sent	624 (52/mo.)	491 (41/mo.)	256 (37/mo.)	1,371	1,189
Responses	537	389	212	1,138	997
Response Rates	86%	79%	83%	83%	84%

Table 3.—Distribution of 2.135 responses to queries for verification of the primary diagnostic code on randomly selected medical insurance claims processed by HMSA during 1992 to July 1994.

Categories of Response	Number in That Category	Illustrations of Coding Changes
New Dx code with the 1st 3 digits intact, or checked as 'OK as-is' on the query letter.	2,004 (94%)	None
Shift to specify location, detail, or alternative related code for the same problem.	78 (3.7%)	789.0 Abdomin. symptoms → 536.8 Dyspepsia 461.1 Acute sinusitis → 473.0 Chronic sinusitis
Shift to new code, apparently to describe another problem in the same patient.	50 (2.3%)	414.9 Ischemic heart dis. → 427.3 Atrial fibrilla. 600 Benign prostatic hypertrophy → 535.5 Gastritis
'Off-the-wall' change, apparently due to single digit typographical error.	3	• → • 216.9 Benign lesion of the skin → 716.9 Arthropathy
Total Responses	**2,135**	* *Probable typographical error.*

Shave Excision of Facial Tumors in Tuberous Sclerosis

Michael R. Brown MD, PhD,* F. Don Parsa MD**

Tuberous sclerosis can manifest itself by multiple facial nodules affecting primarily the nose, cheeks, chin, and the nasolabial folds. A simple tangential (shave) excision of these facial tumors is believed to be adequate treatment for some patients.

Introduction

Tuberous sclerosis is one of the large groups of neurocutaneous diseases seen by plastic surgeons, dermatologists, and other practitioners because of their cutaneous presentations. In 1880, Bourneville associated these cerebral lesions with those of the face, and in 1890 Pringle described the skin lesions of tuberous sclerosis in detail. Tuberous sclerosis is a systemic disorder characterized by a triad of facial lesions, epilepsy, and mental retardation. There is no sexual predeliction and the inheritance pattern is probably autosomal dominant with variable penetrance. The incidence of tuberous sclerosis is one in 20,000. In the past, the facial lesions have been inaccurately called adenoma sebaceum; more recent studies have classified these nodules as angiofibromas that microscopically show interlacing strands of fibroblasts and collagen with numerous small blood vessels. Histopathologically, tuberous sclerosis manifests itself by hyperplasia of ectodermal cells of the skin, brain, heart, kidney, and retina.

The facial distribution of these nodules is quite characteristic and presents in childhood over the cheeks, nasolabial folds, and chin, as well as over the nose and forehead. The most common locations overlie the nasolabial folds and the chin. Other skin manifestations include hypomelanotic macules, subungual fibromas, and shagreen patches.

Alvarez first reported surgical excision and grafting of a massive tumor involving the right cheek in 1957, Divir and Hirshowitz describe cryosurgery of the facial lesions in 1980, and Mulliken first successfully treated these tumors with dermabrasian and limited excision in 1977.

A review of the literature over the past 15 years reveals a paucity of case reports describing specific treatments. Two cases of facial lesions as they occur in tuberous sclerosis are presented, and we will describe and discuss the rationale for our mode of therapy.

Case Report 1

LK, a 19-year-old Caucasian man, was referred for treatment of multiple facial tumors. The facial lesions consisted of smooth-surfaced pink to red nodules of various sizes localized to the nasolabial folds, cheeks, chin, and nose. The lesions had been present since the patient was five years old and had enlarged slowly and progressively. The patient also had a history of generalized seizures with mild mental retardation. A cerebral hamartoma was removed at age 15 and a left frontal cyst was drained a few months later. The patient developed hydrocephalus and required a ventricular shunt at 16. Physical examination revealed a well-developed man with mild mental retardation.

Multiple nodules, measuring from 1 mm to 8 mm in diameter, were present on the face (Fig 1). These were particularly abundant over both nasolabial folds and the chin but also involved the nose and the upper lip, with several small nodules present in the left retroauricular region. The patient underwent tangential excision with Nos 10 and 15 blades. The wounds were covered with Xeroform gauze. Within 10 days the skin was healed, allowing easy removal of the gauze. The patient's postoperative appearance two years after surgery is seen in Figure 2.

Case Report 2

SW, an 18-year-old Caucasian man, was admitted for control of seizures and management of skin tumors. The patient had a history of mental retardation and a history of generalized seizure disorder since the age of three months. The facial lesions had been present since he was four. Physical examination showed a well-developed young adult with obvious mild mental retardation. There were multiple nodules present over the nasolabial folds, cheeks, and chin (Fig 3).

This patient underwent tangential excision under general anesthesia, utilizing Nos 10 and 15 scalpel blades. The lesions were excised to the level of adjacent healthy skin. The postoperative treatment was identical to case 1 and good healing took place within 12 days without any complications. Figure 4 is the 12-month follow-up photograph.

*General surgery resident in training
Department of Surgery
John A. Burns School of Medicine
University of Hawaii
Honolulu, Hawaii

**Professor of Surgery (Plastics)
Department of Surgery
John A. Burns School of Medicine
University of Hawaii
Honolulu, Hawaii

Correspondence and request for reprints:
Michael R. Brown MD
Department of Surgery
University of Hawaii
1356 Lusitana Street, Sixth Floor
Honolulu, HI 96813
Office: (808) 586-2924
Fax: (808) 537-7827



Fig 1.—Preoperative photograph of Case 1.



Fig 2.—Postoperative photograph of Case 1.



Fig 3.—Preoperative photograph of Case 2.



Fig 4.—Postoperative photograph of Case 2.

Discussion

The postoperative results were satisfactory in both cases, and there has been only minimal recurrence of the nodules in a one-year follow-up. We believe this conservative approach is adequate despite the fact that we do not totally eradicate the skin disease. The angiofibromas of tuberous sclerosis involve the full thickness of the skin. In these two cases with extensive involvement, total and complete removal would have required split thickness skin grafting for resurfacing. Such an approach is unwarranted in this clinical setting. These patients do benefit from the aesthetic improvement of subtotal removal, and since these lesions grow slowly, the likelihood that they will require further surgery is small.

In severe cases of tuberous sclerosis, approximately 30% of the patients die before the age of five years and 50% to 75% die before reaching adulthood. Those patients with lesser signs and symptoms can be expected to live longer, but might require further surgery for recurrent skin tumors—a reasonable approach, considering the minimal morbidity of the procedure recommended.

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"Controversies in Medicine," Highlights of the HMA Scientific Session

Elizabeth M. Adams MD, HMJ Reporter

The theme for this year's scientific session was "Controversies in Medicine," and a variety of topics were covered. On the first morning **Michael S. Mega MD**, from University of California, Los Angeles, spoke on the treatment of stroke and on the cause and treatment of Alzheimer's disease. He was followed by **Eliseo J. Perez-Stable MD**, University of California, San Francisco, who addressed cholesterol testing and cancer screening.

Dr Mega noted that the best treatment for stroke is prevention, and when stroke does occur, it should be regarded as an acute emergency. For maximum benefit, therapy should be initiated within two hours of the onset of symptoms. Treatment centers should establish emergency stroke teams to handle these patients. The goals of initial treatment are to optimize cerebral perfusion, oxygenation and metabolism, to stabilize blood pressure and to normalize blood glucose. Language abnormality indicates large vessel disease. Thrombolysis and carotid endarterectomy were discussed. Blood pressure control should not be too strict, especially in those with a prior history of hypertension, to avoid loss of cerebral perfusion. Hyperglycemia indicates a poor prognosis; blood sugar should be maintained at 100-200 mg %. Patients need to be followed closely for brain edema (peak incidence on days 3 to 5) and treated promptly with mannitol and hyperventilation. Steroids should not be used. Dr Mega also described biochemical changes, particularly involving calcium and glutamate. Ongoing research in this area should lead to new treatments.

Next Dr Mega discussed the differential diagnosis of Alzheimer's disease and other dementia syndromes, particularly vascular dementias. All involve cognitive decline. In vascular dementia there are focal neurological deficits, whereas in Alzheimer's motor impairment occurs only late in the disease. Behavioral abnormalities are the usual reason for Alzheimer's patients to need nursing home care. Causation and treatment of Alzheimer's disease are the focus of ongoing research. One issue is whether or not amyloid is causally related to this disorder. Neurochemical changes in brain cells are similar to those in stroke. It is hoped that research in this area will lead to treatment and prevention of Alzheimer's. At the present time Tacrine is the only FDA-approved drug. FDA looks only at cognitive changes in assessing treatment effectiveness. Researchers at UCLA consider both cognitive and behavioral changes and are exploring other treatment options.

Next Dr Perez-Stable discussed cholesterol screening and the use of cholesterol-lowering diets and drugs. Total cholesterol, LDL and HDL should be measured. Triglycerides are not a separate risk factor and are important only if LDL is elevated. Diet modification is the first line of treatment. Drug therapy should be reserved for those at highest risk (coronary or arteriosclerotic heart disease, men age 45 to 75, women age 35 to 75) who do not respond to diet change alone. After age 70 aggressive cholesterol lowering is probably not necessary unless coronary heart disease is present. Other risk factors to be considered are family history of early coronary heart disease, tobacco use, and hypertension. Niacin lowers LDL and raises HDL. In post-menopausal women estrogen also does both. The statins primarily lower LDL; psyllium lowers only LDL.

With respect to cancer screening, Dr Perez-Stable noted that effective screening requires that the number of false-positives with a particular test be low and that early detection reduces the risk of death from the cancer. There have been few randomized screening trials. Screening is more valuable for groups with a high incidence of a cancer, eg, screening smokers for oral cancer or early mammography for women with a family history of breast cancer. Early treatment of cervical cancer results in 90% survival. A Pap smear every three years is adequate except for women at high risk, and there is no need for Pap smears after age 65. Early diagnosis of breast cancer also reduces mortality; a clinical breast exam should be done annually from age 40 and mammography every 1 to 2 years from age 50. For both men and women, stools should be tested for occult blood annually from age 50, and sigmoidoscopy done every 5 to 10 years. Not recommended are chest x-ray or sputum cytology for lung cancer, ultrasound for ovarian cancer, mammography before age 40, and PSA for prostate cancer.

On the second morning we heard about laparoscopic surgery from **Bradley Wong MD**, the medical and surgical treatment of coronary artery disease from **Irwin Schatz MD**, antiviral therapy in the HIV-positive patient, and the care of patients with fatal illness by **Donald Northfelt MD**, of University of California San Francisco.

According to Dr Wong, the use of laparoscopy has increased rapidly since the first cholecystectomy in 1987 and is now being used for many other procedures. In general, use of laparoscopic technique can decrease pain and shorten hospital stays, reducing costs. However, longer operative and anesthesia time, more complications, and the need for expensive equipment increases costs. Accepted procedures for the general surgeon with average skills are cholecystectomy, appendectomy, diagnostic laparoscopy, gastrostomy, and jejunostomy. Procedures requiring more skill are bile-duct exploration, patching of perforating ulcer, biliary/gastric bypass, small bowel resection, colectomy, rectal prolapse, splenectomy, and adrenalectomy. Additional procedures now are being developed in this rapidly evolving field.

Dr Schatz discussed the decision-making process for determining whether to treat the patient with coronary artery disease medically or surgically. A great deal of information exists, but there have been no controlled studies comparing coronary artery bypass graft (CABG) and angioplasty or medical treatment. In addition to assessment of the individual patient (age, level of risk for future cardiovascular events, presence or absence of symptoms, history of previous infarction, which vessels are involved, etc), it is necessary to know the experience, skill level, and track record of the surgeon or cardiologist to whom the patient might be referred for invasive treatment. In general there is little data to indicate that angioplasty or CABG is really superior to medical treatment in low risk patients.

For patients at moderate risk, CABG prolongs survival in those with left main coronary artery disease or involvement of three vessels with reduced injection fraction. For high-risk patients, CABG prolongs survival, but in the elderly the complications are increased. Angioplasty may be preferable to CABG in this group, but good data are not available. Complications of CABG include myocardial infarction in 5% to 10%, cognitive impairment (which usually clears up) in 75%, and strokes in 5% to 8% of those 70 or older. Survival is improved with the use of mammary arteries in grafting instead of saphenous veins. Intensive medical treatment with changes in life style and clinical risk factors can reverse coronary artery disease and may be an alternative for some patients.

According to Dr Northfelt, the drugs currently available for HIV disease can delay the onset of symptoms and opportunistic infections; however, they do not prolong survival very much. Combinations of antiviral drugs may be more effective than the use of single drugs. All of the available drugs are highly toxic and many patients are unable to tolerate them. There is evidence that giving AZT intravenously to infected pregnant women does reduce the risk of transmission of the virus to the infant at the time of delivery. The Centers for Disease Control (CDC) now recommends this practice. Meanwhile new drugs are being developed and, it is hoped, they will produce better results for more HIV-infected patients.

Dr Northfelt discussed caring for patients with fatal illnesses saying the patient and the family need to be involved in planning the care. The goal should be to reduce suffering, which patients usually fear more than death, and improve the quality of remaining life. Particularly important are the control of pain ("The dose that works is the dose that works...No dose of morphine should be regarded as too much") and dyspnea (narcotics are useful here, too.) Hospice care, preferably at home, should be made available. Hospital requirements for resuscitation are inhumane, and patients and families need to be told this. They should be told that, even if there is no possibility of cure, suffering can be relieved. The families that want to force nutrition and hydration on dying patients need to be told that this may increase suffering. Uremic death, for instance, is painless. Narcotics should be given as needed, and the family should be told that the patient will just go to sleep and that any restlessness they observe is not uncomfortable. Dr Northfelt expressed the opinion that euthanasia should never be allowed and that assisted suicide should not be considered unless suffering is intolerable and intractable and the competent patient requests it consistently.

The topic for the final morning was native Hawaiian health care. A panel composed of **Fern Clark RN**, **Stanford Manuia Esq**, *Kahuna Laau Lapaau* **Helen Walrath,** *Kakoo* **Leilani Hayes**, and **Drs Wayne Fukino, Ed Morgan, Steve Moser**, and **Terry Shintani** discussed traditional Hawaiian concepts of health and illness and native healing practices. The ancient Hawaiians were thin, strong and healthy people; unfortunately, today native Hawaiians have the highest rates in the U.S. for death from heart disease, cancer, stroke, and diabetes. In 1988 the U.S. Congress passed the Native Hawaiian Health Care Act to address the problems in a culturally sensitive way. There are now native Hawaiian health care programs on all islands. Through promotion of healthier life styles, return to the traditional Hawaiian diet, and collaboration with native healers, changes in the grim health statistics have begun; some participants have lost weight, lowered their blood pressure, and diabetics have reduced or eliminated their need for insulin.



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News and Notes

Henry N. Yokoyama MD

Life in These Parts

Hawaiian Rent All Sign

"Teed off? Play golf"

Heard on KHVH radio

The commentator was covering the November 10 San Francisco-Dallas game: "The score is 24 to 0 with San Francisco leading. Oops! There's a penalty on that play. The call is tripping, but it's more than that, his (the ball carrier's) voice suddenly went alto."

The hostess at the local saloon sprained her back when she tripped on the stairs. She later returned to work in high heels. "My doctor sez to keep my feet elevated," she explained.

(Paul Harvey, November 13)

Physician Moves

October.—Anesthesiologists **Donald Fancher, Jr** and **Robin Takata** joined the Physicians' Anesthesia Services at Kuakini Medical Plaza, Suite 306. Surgeon **Glenn Kokame** announced his retirement effective October 31 with this farewell note: "I wish to thank patients, physicians, and friends for their support for the many years."

Potpourri

"I have good news and bad news," the defense attorney told his client. "First, the bad news—the blood test came back, and your DNA is an exact match with that found at the crime scene."

"Oh no!" cried the client. "What's the good news?"

"Your cholesterol is down to 140."

"Let me Rephrase..."

Doctor.—"Well those strange lumps on your buttocks don't seem to be doing any harm. All I can suggest is that they could be due to a series of injections in which the needles were rather blunt and not properly cleansed and these are residual scar tissue from the infections. Have you ever had such injections?"

Patient: "Only once. Don't you remember when I was a little kid with an earache?'

Chris Malcolm (Stitches, October 1995)

Letters to the Editor

In his letter dated September 30, **Dennis Meyer** complained: "The media is doing a great disservice to patients by giving broad coverage to papers concerning calcium channel blockers. Studies of 20 or fewer patients with controversial results are given front page headlines as "met analysis." They are published in newspapers and produce panic in patients who frequently discontinue appropriate medical regimens only to experience serious complications. This community has many nationally recognized experts in all fields of health sciences. Please check with the authorities as to the validity of any scientific papers prior to publication. The First Amendment has a double cutting edge and requires extreme responsibility on all sides. This study and its media attention are comparable to crying fire in a crowded theater."

Hors de Combat

In October, **Kim Thorburn** (Dept of Public Safety health care director) and **Terrence Allen** (prison physician for eight years) testified before lawmakers about how conditions in prisons have deteriorated the past two years. Kim reported that inmates are reluctant to ask for medical or mental health care because guards deny medical staff and inmate patients any privacy. Kim accused prison administrators of routinely interfering with medical decisions. Terrence described the Halawa High Security Facility as "a monster factory where men are dehumanized in a systematic fashion."

Miscellany

Religion in the OR?

While making ward rounds with the charge nurse, I visited a gentleman awaiting surgery later that day. I asked him if he had any questions.

"No," he replied, "the atheist was in and answered my questions."

"You must be referring to the anesthetist," I suggested.

The nurse interjected, "Well, the surgeons think they're gods, so the anesthetists are atheists."

T.A. Barnhill (From Stitches, October 1995)

Conference Notes

"Cardiovascular Medicine in Managed Care Era" lecture by cardiologist **John Cogan** at QMC-UH Friday morning conference, October 27.

Expenditures 1994: $128 billion

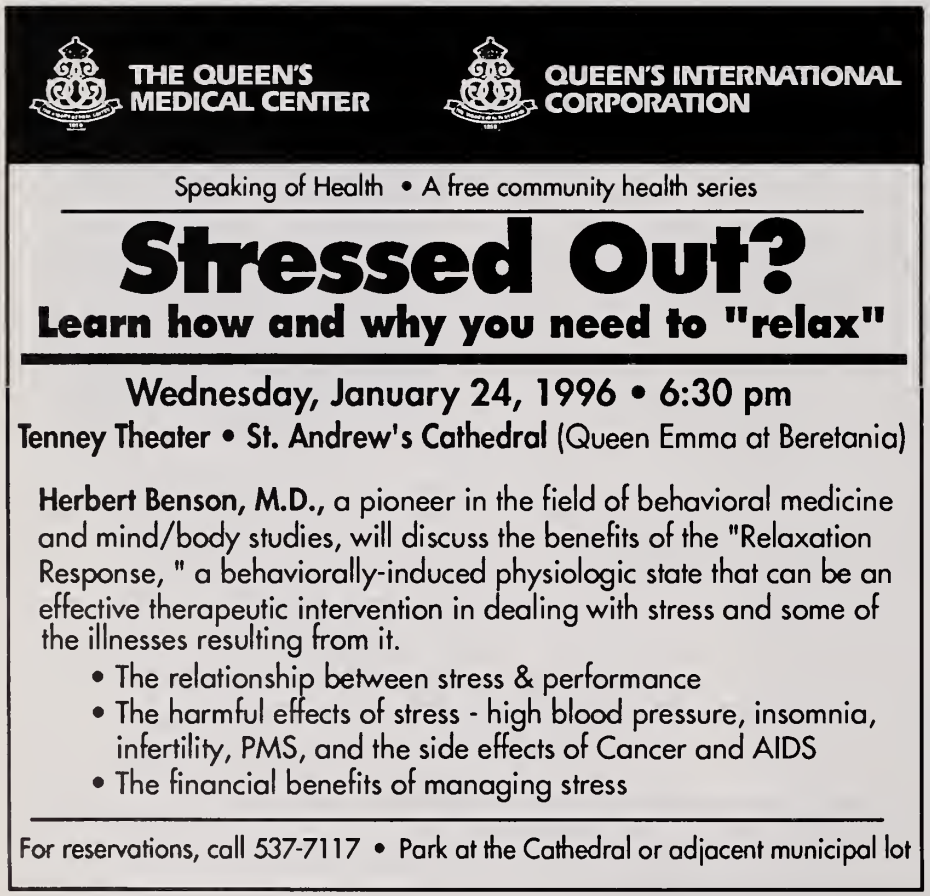
- Procedures
 1,057,000 cardiac caths
 407,00 CABGs
 550,000 angioplasties

Trends in Progress

Containment of health costs by: self-funding; formation of purchasing alliances; direct involvement in health care by business community. The "F" word is capitation; another cost-saving strategy is bundling (package pricing).

Cardiac Savings in an Era of Capitation

- Mitral valve prolapse: If click present on exam, then MVP is confirmed. ECHO is superfluous. Don't order ECHO to ro prolapse, if no murmur, no need for endocarditis prophylaxis.
- Congestive heart failure: Use digitalis to decrease hospital re-admissions. ACE inhibitors prolong life.
- Syncope-presyncope: Most of the causes are cardiovascular. Don't send patient to neurologist first.



Classified Notices

To place a classified notice:
HMA members.—Please send a signed and typewritten ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in *HMJ* as space is available.
Nonmembers.—Please call 536-7702 for a nonmember form. Rates are $1.50 a word with a minimum of 20 words or $30. Not commissionable. Payment must accompany written order.

Office for Sale

Kuakini Medical Plaza.—1640 sq ft leasehold condominium. Ideal for two physicians. 6 exam rooms, kitchen, bathroom/shower, laboratory, available. Call 537-4511.

Pearl City Business Plaza.—Long leases; 680+sq ft; 24 hr security; free tenant/customer pkg; available now; call 531-3526 Gifford.[5]

Retiring Physician Office Practice.—1314 S King St. Parking. Fully operational/furnished computer system. 760 sq ft, ready to move in and assume 31 yrs of private practice. Favorable terms available. Pager number 577-8459.

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Wanted:—Unexpected opening for a physician for small tropical Pacific island, U.S. Wildlife Refuge and Defense Dept facility. Annual pay $115K with generous leave and benefits. Lodging and meals provided. Join 2 to 3 other physicians to staff low-intensity outpatient clinic. Close specialist, medivac, and telemedicine support from Hawaii medical centers. Excellent recreational opportunities include windsurfing, sailing, scuba, tennis, golf and many other sports, with all equipment provided. A relaxing opportunity for a well-rounded and independent physician desiring a remote location. Fax CV to Human Resources, Kalama Services, (808)-836-1277, Attn: Leigh Wright,or e-mail kalamahi@aol.com.

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A Tisket A Tasket...a very special basket! Custom gift basket arrangements artistically designed and filled with a variety of items. Corporate party centerpieces and favors made to order. Jo Ann, 377-5436/574-9247 (pager).

Locum Tenens

Locum tenens available.—Board-certified family practice, 12 years' clinical experience in Hawaii. Deborah C. Love MD; home phone on Oahu: (808) 637-8611; cellular phone Maui: (808) 281-4713.[2]

Radiologist.—Available on short notice for locum tenens. Full or part time, any island. (808) 875-9794.[1]

- Major causes
 - Aortic and mitral stenosis
 - IHSS
 - Tachycardia and bradycardia
 - Heart block
 - Vaso-vagal
 - Iatrogenic (eg, BP meds)

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 - Holter
 - Tilt table testing
- Tee (Transesophageal echo)
 For assessing suspected infectious endocarditis; detecting aortic dissection

CAD
- Mortality CAD—513,700/yr
- CVD Mortality—991,332/yr
 Chest pain: Typical angina: 90% probability of CAD
- CAD evaluation
 - Resting EKG normal: Do routine treadmill
 - Resting EKG abnormal: Do resting treadmill followed by thallium scan (Gold standard) or stress ECHO

Advantages of Stress ECHO
- Simplicity
- Time
- Cost: $800
- Values added: Lt ventricle and valvular function

Chest Pain Syndrome
- History
- EKG
- Enzymes
- Stress testing

CCU admission: only 50% CAD yield

Acute MI

Open artery hypothesis. Improved LV function; increased survival
- Medical management: streptokinase versus tpA; thrombolysis: danger of intracranial hemorrage heparin; ASA
- Primary angioplasty: 90% success

All post-MI patients should be on:
ASA indefinitely and beta blockers for 18 months.
ASA alone: 10.7% mortality
SK plus ASA: 8.0% mortality

AMI Management:
- Ejection fraction less than 40%: ACE
- Large infarction: Coumadin 3 mos
- LOS 5 days with predischarge TST

PTCA: Suitable for PTCA: any age; any coronary syndrome; any vessel or graft except LM: any vessel: single or multiple; any complicating medical problem; CRF, CHF, etc.
- Unsuitable for PTCA
 - Diffuse disease; small vessels; heavy calcification; old bypass; Lt main disease; old complete occlusion; restenosis.
- Disadvantages of PTCA
 - Not for every coronary patient; restenosis; needs surgical team standby.

In-Hospital Mortality:
PTCA: Less than 1.0
CABG: Less than 2.0

Five-Year Survival:
PTCA: Less than 1.0
CABG: 92%

Primary Success:
PTCA: 90%
CABG: 90%

Cost:
PTCA: $9,000
CABG: $23,000

Time Lost:
PTCA: 3 weeks
CABG: 11 weeks

Return to work:
2 days PTCA (79% to 100%)
10 days CABG (69% to 91%)

PTCA

Safe; effective; cheaper; prompt recovery; short LOS; less traumatic; prompt return to work
- Achilles Heel: Restenosis 25% to 35%
- Unresolved problems: Restenosis chronic total occlusions; radiation exposure to MDs and technicians.

Comparison medical versus PTCA (3 years later)

	Medical	*PTCA*
No symptoms	14%	60%
Working	63%	80%

Adjunctive Technology
- Stents
 - Eccentric stenosis
 - PTCA dissection
 - Inadequate response to PTCA
 - Restenosis
 - Grafts
- Rotoblator (rotational) Artherectomy:
 - small vessels
 - heavy calcification

Inpatients over age 60, look for abdominal aneurysm.

The Weathervane

Russell T. Stodd MD

There are two kinds of people, those who finish what they start, and so on...

Nice guy, witty and charming, Richard Mills MD, the outgoing president of the American Academy of Ophthalmology, honored the HOS at the November annual election meeting. Dr Mills has toiled in the fields of private practice and now serves as professor of ophthalmology at the University of Washington Medical School. His eloquence at the AMA House of Delegates in speaking on behalf of the AAO and all eye surgeons served to educate the House and helped forge the AMA policy opposing HCFA's plan for centers of excellence. He noted that the AAO currently enjoys a high rating from members because the two-thirds who supported the plan to ally with Lenscrafters were glad for the effort, and the one-third who opposed it were happy with the failure. Now, says Dr Mills, the AAO leadership is primed, poised and ready to take a new direction, but doesn't know which way to go.

There is nothing so ridiculous as the public in a fit of morality.

Three New York physicians challenged the constitutionality of laws that prevent assisted suicide. The point was made that the state recognizes the right of a competent terminally ill patient to refuse treatment even if doing so hastens death. The doctors contended that a patient in a similar circumstance, deciding to commit suicide with the help of a physician, is essentially the same issue. The court disagreed and held that a vast difference exists between allowing nature to take its course and intentionally prescribing death-producing medication. Present AMA policy reflects the court's ruling.

A learned blockhead is a greater blockhead than an ignorant one.

A legal event in Texas may open the door for plaintiff's attorneys to look into the personal medical records of a defendant physician. A doctor delivered twins, the first healthy, but the second suffered from asphyxia and was severely brain damaged. Two months after the delivery, the doctor was admitted to a mental health facility. Learning of the doctor's health problems, the plaintiff's attorney demanded to see the records of treatment and claimed that the information would reveal whether the doctor was "impaired" when he delivered the brain-damaged infant. The Texas Medical Association filed a brief on behalf of the doctor stating that a patient's right to protection of medical records would be seriously compromised "if parties to a lawsuit can freely probe the supposedly secret records of their opponents by simply stating that the opponent might have some condition that contributed to the allegations." By a vote of 8 to 1, the Texas Supreme Court ruled that the trial judge will review the records and release them to the plaintiffs "only to the extent necessary to provide relevant evidence relating to the condition alleged."

We have only one person to blame, and that's each other.

Now it can be told. Rude doctors get sued more than courteous ones! A study done at Vanderbilt University and reported in JAMA revealed that doctors who are rude, rush visits, and fail to answer questions are more likely to engender complaints. The patients of those doctors also reported twice as many instances of doctors' shouting at them. Contrarily, doctors who had never been sued were seen by their patients as concerned, accessible, and willing to communicate. The point is obvious, yet needs repeating: misunderstanding and anger are often behind a patient's complaint irrespective of the doctor's technical ability. So, remember to speak softly, speak kindly, listen attentively, and always brush your teeth.

Rascality has limits; stupidity has not.

Bruce Vladeck PhD, head of HCFA, stated that the government may require eye surgeons to demonstrate that cataract extraction is medically necessary before Medicare will pay. Deja vu. Excuse me! Did the carriers not require such criteria just a few years ago, and did not the findings reveal that the effort was expensive and fruitless? "Surgery will not be considered necessary if the individual is able to function normally, or if the condition can be corrected with glasses," said the director. Is it possible that what he is really saying is Medicare will refuse to pay for a second cataract if the patient has had successful surgery in one eye?

In dealing with politicians, you can be sure of only one thing: the logical solution will not be adopted.

On one hand, Congress has urged market forces to establish costs and mechanisms for medical care, but now we see the Kassebaum-Bradley Senate bill to define hospital stays for deliveries. Supporters claim the legislation will outlaw the "drive-through" deliveries of some HMOs. Entitled "Newborns' and Mothers' Health Protection Act of 1995" the bill is almost certain to pass in some form or other. But if it is rational for Congress to micro-manage newborns, what about hospital stays for post-op surgeries? Some patients are just not ready to jog home after hernia surgery, not to mention cholecystectomy. Do they not deserve legislation? If HMOs or other managed care plans abuse patients or fail to provide quality care, doctors' and patients' complaints will force appropriate change. For Congress to practice medicine is a great threat to all, both patients and doctors.

Sign in San Francisco driveway—"Visualize being towed."

Not long ago stolen cars were recovered at a rate of 85%, but times have changed. Now the recovery rate is down to 62%, and car thieves are much more likely to sell your stolen vehicle to a chop shop where it is stripped for parts, sold to a middleman, and resold, frequently to an overseas buyer. The most popular models for theft are Honda Accord, Olds Cutlass, Ford Mustang, Toyota Camry, Chevrolet Camaro, and Cadillac Deville. Cost to the public in 1994 alone was $7.5 billion, according to the National Insurance Crime Bureau.

Addenda

- In 1992, there were 1,455 ping-pong-related injuries requiring hospital visits.
- The cost of having Kim Basinger come to your party, $85,000; to have Pavarotti sing, $187,000.
- Most vegetarians look so much like the food they eat that they can be classified as cannibals.

Aloha and keep the faith— rts ■



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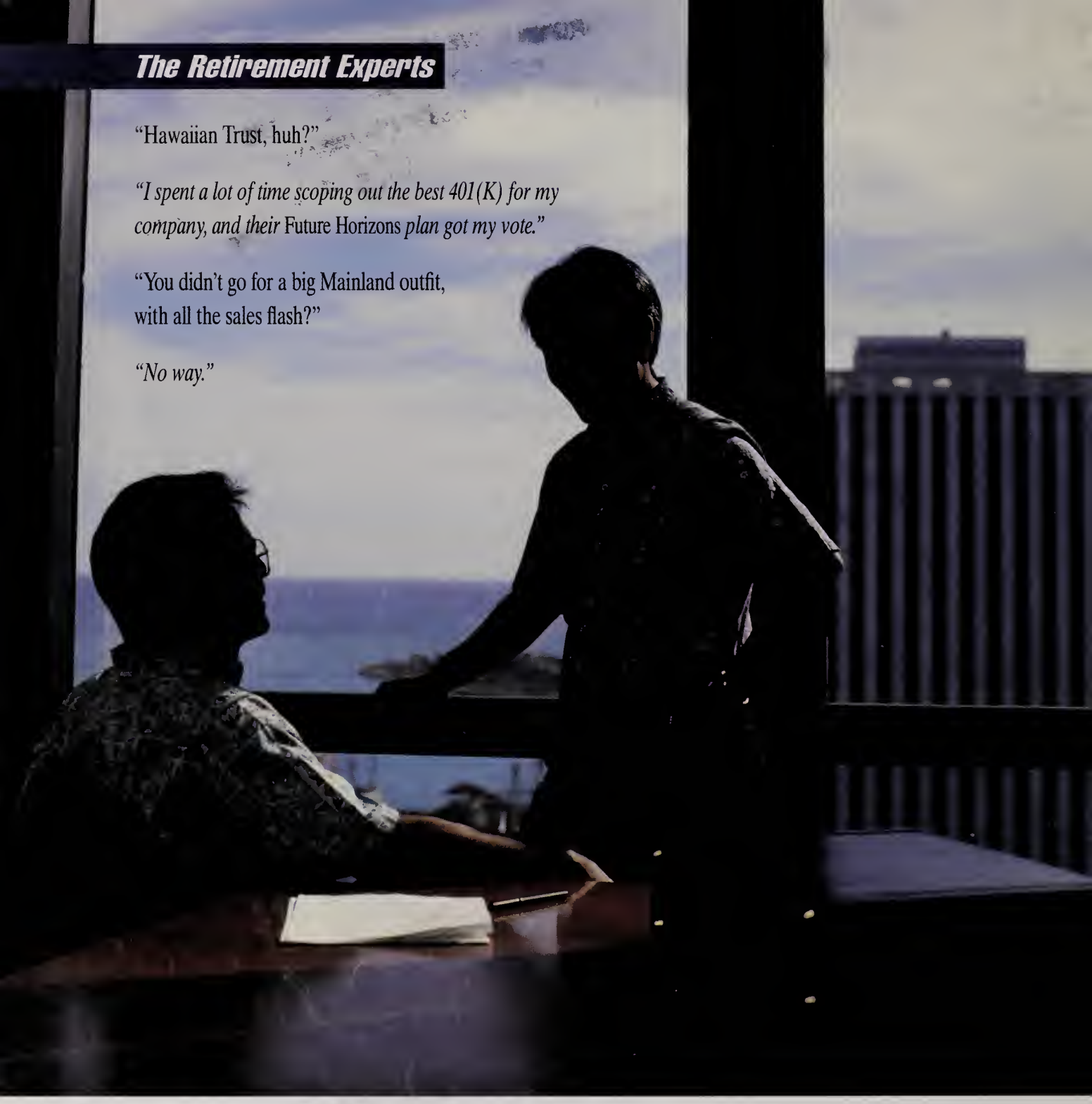
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3036-A Kahaloa Drive
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Manini

Manini is also known as the *Convict Tang* because of the dark stripes across its body. A favorite eating fish in Hawaii, Manini sometimes can be seen in huge schools while diving or spearfishing.

Hawaii Medical Journal Forms Foundation

The Hawaii Medical Foundation Fund, HMA Community Research Bureau 501 (c) (3), has been established to support the *Hawaii Medical Journal*. All contributions are tax deductible.

If you would like to support the *Hawaii Medical Journal*, please send contributions to the Hawaii Medical Association, 1360 S. Beretania, Second Floor, Honolulu, HI 96814. Please make your check payable to the *Hawaii Medical Journal*. Thank you for your continued support.

We are always looking for interesting scientific articles. To submit a manuscript, please call us for manuscript guidelines.

We also are starting a new Business Card Directory page in the back of the *HMJ* with the classified ads. You now can submit your business card to advertise in the *Journal* each month. Each card is $100 a month or $1100 a year. For inquires and/or business card submissions, please contact the Communications Secretary at (808) 536-7702.

Editorial

Norman Goldstein MD

So you think this is a thin issue of the *Journal?* You're right!

Medical journals survive (or perish) because of advertisers, society dues allocations, and individual subscriptions.

Jack Lewin MD, now Executive Vice President of the California Medical Association, wrote in the January 1996 issue of *California Physician*:

> "Despite excellent performance by staff and editors, and many recent cost-cutting innovations, declines in membership, income, and advertising revenue have generated the challenge we are facing. However, *WJM* (*Western Journal of Medicine*, the CMA's scientific publication) will meet this challenge.

Jack is right on—for the *WJM* and for the *HMJ*. But, we must have more advertisers with more regular monthly ads. The ads in our special issues help, but it is the guaranteed 12 issue ads that will keep the *Journal* going for another 50 years. (We celebrated our 50th anniversary in September 1991 with an issue dedicated to the memory of Harry L. Arnold, Jr, MD.)

You can help. Speak to your drug company representatives and suppliers, your bankers, your car dealers, your friends and associates. Remind them that we have 1,800 copies sent monthly to members of the Hawaii Medical Association, as well as to medical libraries, attorneys and other individual subscribers. A lot of *qualified buyers* read the *Journal* and see the ads—regular, repetitive advertising really does sell products and services.

Then, call or fax our advertising representatives, Lori Arizumi or Janet Scheffer, phone (808) 988-6478, fax (808) 988-2785, with the leads and they will follow through to get the advertisements.

Many of our readers know Jack Lewin MD, former director of the Hawaii Health Department, Maui physician, and candidate for governor. In addition to keeping the 100-year-old *Western Journal of Medicine* afloat, he serves as a health consultant and CMA's Executive Vice-President.

Dr Lewin is, however, incorrect in his *California Physician* column when he says, "Other than the *New England Journal of Medicine, WJM* is the only remaining peer-reviewed scientific journal in the United States published by a state medical association."

Jack, there is another—the *Hawaii Medical Journal*. And we will keep it going, with a little help from our friends!

Next month, look for the long-awaited manuscripts by Manino, Ruben, the Holschuhs, and Wilson, dealing with Big Island Vog-associated problems.


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HMA President's Message

Carl W. Lehman MD

The American Medical Association has formed the National Coalition of Physicians Against Family Violence to assist state and local societies to address the treatment and prevention of child abuse, sexual assault, spousal abuse, and elder abuse. The HMA Alliance has launched its campaign to Stop America's Violence Everywhere (SAVE).

The HMA's Domestic Violence Committee chaired by Drs Florence Chinn and Shay Bintliff is very active. That committee presented an excellent evening program on domestic violence last year, and proposed a resolution at the HMA Council on December 16 that Council passed. The resolution proposes that the State Legislature adopt a law that would protect children from all forms of physical or mental violence, injury, abuse, neglect or negligent treatment, mistreatment, or exploitation including sexual abuse while in the care of parents, legal guardians, or any other person entrusted with a child's care.

It was further recommended that a commission be appointed to determine a course of action banning corporal punishment, such as spanking, smacking, slapping, etc, in the home and in public settings. The resolution also recommends that the law ensure provision of appropriate services and information programs for future parents and other care-givers to encourage ways of child-rearing that promote dignity, respect, and self-discipline.

Also we recommend that the law provide a state-coordinated parent-training institute to teach parents how to provide a safe, supportive, nurturing environment for all children.

Hawaii presently has many laws to assist in coping with domestic violence. A major problem is implementing and enforcing these laws. According to a report from *Advocacy in Action*, a newsletter from the Domestic Violence Clearinghouse, Hawaii's laws include:

Mandated arrest.—Whether or not they witness the offense, police officers on all Hawaiian Islands are required by their departments to arrest when there is "probable cause" to believe abuse of a household member has occurred. State law specifies officers may arrest.

No drop policy.—Prosecutors in our state determine when charges will be filed and they will not drop any domestic violence case unless there is insufficient evidence to prosecute. A victim cannot drop the case against an abuser. Domestic violence is a crime against the state.

24-hour keep-away orders.—At the scene of a domestic disturbance police may order a perpetrator to stay away for 24 hours—or longer on weekends and holidays. State law says police must arrest if this order is violated.

Mandatory jail terms.—Convictions or guilty pleas for abuse of a household member have minimum jail terms mandated by law—48 hours for first offense and 30 days for subsequent offenses. Some Protective Order violations also are classified as misdemeanors and have the same mandatory sentences. The maximum jail term for misdemeanor offenses is one year.

Protective orders.—Designed to give victims immediate and long-term relief, victims can be granted 90-day *ex parte*—without a

hearing—temporary restraining orders (TROs) on petitioning Family or District Court. The TRO can order the perpetrator out of a shared residence and prohibit him or her from contacting, threatening, or abusing the victim.

At an Order to Show Cause (OSC) hearing, held within 15 days after a TRO is granted, temporary child custody and visitation can be decided by the court. The court also can order substance abuse assessments for plaintiffs and/or defendants. At the OSC, the TRO becomes a protective order and can be extended up to three years. Protective orders do not provide financial assistance of any kind.

Protective orders also can be included in divorce actions or issued by a judge as a condition of release.

Stalking.—Harassment by repeatedly stalking is a misdemeanor. Stalking once is a petty misdemeanor. Police should be called and a report filed for every offense. If safe and if possible, victims should point out the stalker to others. Stalking is a difficult offense to prove and prosecute unless there are witnesses.

No interspousal tort immunity.—A victim now can sue his or her spouse or former spouse for compensation for injuries inflicted.

Battered spouses may be exempt from mediation in divorce proceedings.—Although the court prefers mediation in contested divorce actions, it acknowledges when there is violence, mediation may be threatening and dangerous for the victim. The court may excuse a party from participating in any component of any mediation program.

Firearms restrictions.—When the TRO is served, the defendant is ordered to surrender firearms and ammunition. Defendants charged with abuse of a household member also must surrender firearms at the time of their arraignment and plea hearing.

Presumption against batterers in custody awards.—The court must provide written findings before awarding child custody to a known batterer.

No marital rape exemption.—Hawaii's progressive sexual assault statutes address rape as violence and do not exclude persons assaulted by current or former marriage partners.

The AMA Coalition Against Family Violence provides pamphlets on the diagnosis and guidelines for the treatment of child physical abuse and neglect, child sexual abuse, domestic violence, elder abuse and neglect, and mental health effects on family violence, strategies for the treatment and prevention of sexual assault, and a directory of protocols for health care providers on domestic violence.

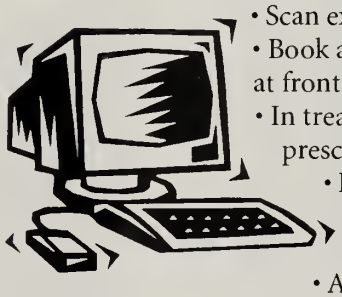
For more information on domestic violence and to join the Coalition, write to Marshall Rosman PhD at the AMA, 515 North State Street, Chicago, Illinois 60610.

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New Method for Breast Cancer Detection using TC-99M Sestamibi Scintimammography

Monita Yuen-Green MD, Richard Wasnich MD, Susan Caindec-Ranchez CNMT, James Davis PhD*

The combination of breast examination and radiographic mammography (XRMM) are the established methods for breast cancer detection. However, XRMM lacks sensitivity and specificity in women with dense breasts, leading to false positive findings in 80% and false negative findings in 10% to 15% of the cases.

Tc-99m Sestamibi (MIBI) scintimammography (SMM) is a new breast-imaging technique. This study shows that SMM has a positive predictive value of 83% and negative predictive value of 93%, which is similar to that reported by others. This supports other published reports that SMM is a potential excellent complimentary imaging technique to XRMM in improving the accuracy of breast cancer detection.

Introduction

Breast carcinoma is an important public health problem in the United States. One in eight women will be diagnosed with breast cancer, and one woman in 25 will die of the disease. Early detection is known to improve survival. Currently, the most effective means to detect breast cancer is XR mammography. However, XRMM lacks sensitivity and specificity in women with dense breasts, leading to a low positive predictive value (11% to 30%) which results in major costs including unnecessary biopsies, anxiety and residual scarring.[1,2] The false negative rate for XR mammography has been reported to vary from 10% to 15%, which may lead to delays in biopsy and diagnosis.[3] Therefore, major endeavors are justified to improve both the positive and negative predictive values of screening and diagnostic techniques.

Tc-99m Sestamibi (MIBI) scintimammography is a noninvasive imaging technique for screening and diagnosis of breast cancer. The uptake of MIBI in the breast is independent of the presence of dense breasts seen on XR mammography. Preliminary data show that this imaging technique has high sensitivity 95.8% to 100%, specificity 85% to 86.8%, positive predictive value 82.1%, and most important, high negative predictive value 97.1%.[3-4] Other investigational breast imaging techniques, such as magnetic resonance imaging (MRI) showed a sensitivity of 94% and specificity of 37%, while breast echography had a sensitivity of 49.2%.[5-6] Positron emission tomography (PET), another nuclear medicine imaging not currently available in Hawaii, has been shown to have a sensitivity of 80% for breast cancer detection.[7] Tc-99m MIBI scintimammography has been reported in recent studies to have a remarkable potential in selecting those patients who would benefit most from breast biopsy and reduce the number of negative biopsies.[3]

Methods

Patient population

Eighteen women (mean age of 53.9± 10.8 years) were enrolled in the study with informed consent. Each patient was examined by an investigator in the supine and upright positions and had XR mammography before enrollment into the study. Study inclusion criteria consisted of either a palpable breast mass and/or an abnormal XR mammography for which biopsies were recommended.

Mammography

Mammography was performed in standard craniocaudal and mediolateral oblique projections using a dedicated mammography unit. Additional views using cone compression and magnification were performed as indicated. The mammographic results were collected at the time of the initial interpretation with full knowledge of available clinical information and the patients' previous mammograms. All images were evaluated by two experienced radiologists. Any disagreement was resolved by consensus.

Scintimammography

Each patient received 20 mCi (740MBq) Tc-99m MIBI (Cardiolite, DuPont Pharma, Billerica, Mass) intravenously in the arm contralateral to the breast with the abnormality. Breast scintigraphy was performed using a single-head gamma camera (ADAC Genesis), equipped with a high resolution collimator. The spectrometer was centered at 140 keV with a 10% window. Patients were imaged in the prone position, which allowed the breast being imaged to be freely dependent of the imaging table. Each breast was imaged separately in order to exclude activity in the opposite breast.

Three standard planar images of the breasts and chest were acquired with a 128x128 matrix for 10 minutes per view. A 10-minute lateral image of the breast with the suspected lesion began 5 minutes post-injection. The patient was then repositioned with the contralateral breast dependent, and another lateral image was acquired. A final 10-minute anterior chest image was obtained in the

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supine position with the patient's arms raised for visualization of both axillae.

The amount of radiation to the patient from one dose of 20 mCi of Tc-99m MIBI would be 0.13 rad to the breasts (compared with mean radiation dose of 0.16 rad by standard 2 view XR mammogram, plus 0.08 rad per additional view). The estimated amount of total body radiation from one dose of Tc-99m MIBI is 0.33 rad, which is roughly equivalent to that of radiographic imaging of the lumbosacral spine.

All images were evaluated for abnormal Tc-99m MIBI uptake by two nuclear medicine physicians blinded to the patients' clinical presentation and mammographic results. Any disagreement was resolved by consensus.

Data analysis

XRMM results were classified into three categories: normal, 0, benign or very low suspicious, 1, suspicious, 2. Categories 0 to 1 are classified as negative while category 2 is classified as positive interpretation for cancer. Similarly, SMM results were classified into 3 categories by visual scoring: normal, 0, benign, 1, and suspicious, 2. Categories 0 to 1 are classified as negative while category 2 is classified as positive interpretation for cancer. Results of XRMM and SMM were correlated with excisional biopsy in 20 lesions and core-needle biopsy in one lesion. Statistical analysis was performed based on the comparison of the proportions as paired samples.[8]

Results

Eighteen women with 21 lesions were studied (mean age of 53.9±10.8 years): There were 9 palpable masses and 15 abnormal XR mammographic lesions. Four of the 15 abnormal XR mammographic lesions were palpable. Pathology results were obtained by excisional biopsies in 20 lesions and core-needle biopsy in one within one month after XR mammogram and scintimammogram.

There were 6 malignant primary breast cancer lesions and 15 benign lesions. Three of the 6 malignant lesions were palpable. The size of malignant lesions on pathology ranged from 0.1 cm to 1.8 cm measured in the largest diameter with the mean size of 1.1 ± 0.6 cm. Scintimammogram correctly detected 5 of 6 malignant lesions, whereas XR mammogram detected only 4 of 6. Scintimammogram identified 14 of 15 benign lesions correctly while XR mammogram identified only 4 of 15. Twelve patients had 15 benign lesions and only one patient had a false positive SMM result. By contrast, 11 had false positive results by XRMM (Table 1).

The sensitivity of SMM in this study is 83% compared with 67% for XRMM ($p>0.75$). The specificity of SMM is 93% compared with 27% for XRMM ($p<0.005$) (Fig 1). The positive predictive value of SMM is 86% compared with 27% for XRMM. The negative predictive value of SMM is 93% compared with 67% for XRMM (Fig 2).

Table 1.—Results of Radiographic Mammography (XRMM) and Scintimammography (SMM).

EXAM	TP	FP	FN	TN
XRMM	4	11	2	4
SMM	5	1	1	14

PE = Physical examination; XR = radiographic mammography; SMM = scintimammography; TP = true positive; FP = false positive; FN = false negative; TN = true negative.

Discussion

Approximately 175,000 women in the United States are diagnosed as having breast cancer each year, representing 32% of all women diagnosed with cancer. Breast cancer also is causing more than 150,000 hospitalizations and 44,000 deaths annually in the U.S. Efforts to reduce morbidity and mortality from breast cancer have focused on a combination of breast self-examination, clinical

Fig 1.—Comparison of the sensitivity and specificity of scintimammography (SMM) and radiographic mammography (XRMM).

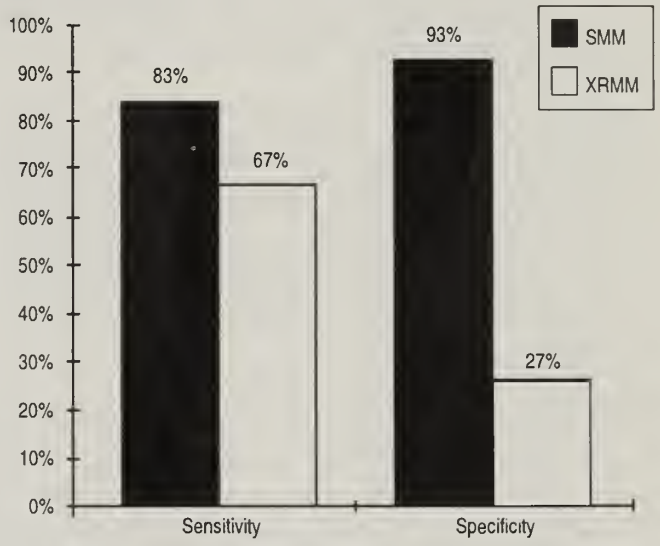
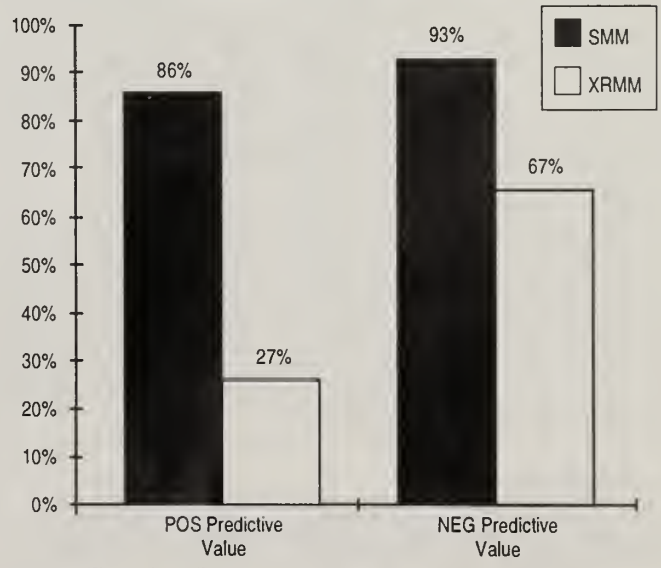


Fig 2.—Comparison of the positive and negative predictive values of scintimammography (SMM) and radiographic mammography (XRMM).



breast examination, and mammography. However, 11% to 30% of women with breast cancer have benign-appearing mammograms.[1,9] This indicates the importance of physical examination and the need for the development of an effective alternative imaging technique for this subset of patients.

Of those women who are referred for breast biopsy, only one in five is a true positive, and therefore, has a malignant breast tumor. The incidence of benign breast biopsy is even higher in younger women, about 16.4 benign to one malignant biopsy in the 35 to 39 age group, and 9.5 to one in the 40 to 44 age group. The high benign biopsy rates in these younger women probably reflect the high incidence of fibrocystic disease in women of this age group.[10] Recent studies have shown that in the subset of patients with radiodense breasts, surgical or radiotherapy scars, or breast prosthesis, SMM is an excellent complimentary imaging technique to XRMM in improving the accuracy of breast cancer detection.[11]

Tc-99m Sestamibi (MIBI) is an FDA-approved radio-pharmaceutical that has been used mainly in myocardial perfusion studies for the detection of coronary artery disease. It also has been used for other tumor imaging, including brain, bone, thyroid, parathyroid and lung. It is not metabolized, and it is excreted into the biliary system within one hour.

The exact mechanism of cellular uptake of Tc-99m MIBI by carcinomas is unknown but recent data suggest it is concentrated in the mitochondria. Laboratory studies also have shown that MIBI uptake may be impeded by the presence of p-glycoprotein, a membrane transporter on cell surfaces, found in multidrug-resistant cancers.[12] This may lead to false-negative readings on SMM. On the other hand, SMM may have the potential to determine multidrug resistant tumor and help in the chemotherapy management of breast cancer patients.

The one false negative case in our study is a woman who had a surgical biopsy for a palpable breast mass. The pathology showed intraductal adenocarcinoma that was missed by XRMM. Her SMM was done about two weeks after her surgical biopsy showing minimal uptake which was classified as benign inflammatory reaction after biopsy. Her mastectomy specimen showed a single 0.1 x 0.1 cm residual tumor focus. Other investigators have reported low sensitivity of SMM for the detection of breast lesions less than 6 mm.[13] A larger scale multi-center trial is underway to validate the accuracy of SMM.

The SMM of the one false positive case in this study showed a slight degree of focal uptake. This patient had no palpable mass but an abnormal XRMM indicating suspicious subareolar microcalcification. The biopsy result showed fibrocystic disease with benign ductal adenosis. Others have reported false-positive SMM results in highly proliferative conditions such as fibroadenoma and fibrocystic disease.[3] Semiquantitative evaluation of MIBI uptake using region of interest technique may enhance the specificity of SMM for detecting breast cancer.[14]

SMM is a promising new imaging technique with preliminary data indicating improved accuracy for the detection of breast cancer. This new imaging technique has the potential to decrease the number of benign biopsies, thereby substantially reduce physical and psychological scarring, costs, and morbidity of unnecessary biopsies, thereby, benefiting both patients and third-party payers. It also may make mammographic screening more cost-effective, especially among women under 50.[15]

Conclusion

The combination of breast examination and XR mammography (XRMM) is the established method for breast cancer detection. XRMM remains the procedure of choice in screening; however, it has a number of critical limitations leading to false positive findings in 73% and false negative findings in 33% of our study.

Breast scintigraphy (SMM) is a noninvasive nuclear medicine imaging procedure with preliminary data indicating high accuracy for the detection of breast cancer. SMM has the potential to reduce the large number of breast biopsies performed for benign, non-neoplastic conditions. In our small study sample, SMM appears to be both more sensitive (83% versus 67%) and specific (93% versus 27%) than XRMM. Further studies are warranted to determine the role of SMM as a breast cancer detection tool and to define the subgroups of women who would benefit most from this test.

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Highlights of the Proceedings of the HMA House of Delegates

Leonard Howard MD, Speaker of the House of Delegates

On October 6 to 8, 1995 the 139th Annual Meeting of the Hawaii Medical Association was called to order at 1:30 pm at the Hyatt Regency Hotel on Maui by **Speaker Len Howard MD. Roger Kimura MD**, HMA Secretary, announced that more than 45 certified delegates were seated which is a quorum.

S. Kalani Brady MD chanted the invocation. The Speaker called on the county presidents to read the necrology and a moment of silence was called for those members deceased since the last meeting.

William Dang, Jr, MD was appointed Parliamentarian and **Ernest Bade MD** and **Sakae Uehara MD** were appointed Sergeants-at-Arms by the Speaker. The minutes of the 138th Annual Meeting were approved as published.

The Speaker then called on **President Fred Holschuh** to introduce **Daniel H. (Stormy) Johnston, Jr, MD**, AMA President-elect, who gave the Presidential Address. He addressed the various problems facing organized medicine currently and outlined the position of the AMA on several controversial points. He emphasized the importance of a strong medical organization on the local and national scene. **Cal Kam MD**, one of our AMA delegates, then presented a resolution of support for AMA positions from the HMA.

Herbert K.W. Chinn MD, Vice Speaker, reviewed the modus operandi and nominating and election procedures for the delegates, then called on Secretary Kimura to appoint the tellers for the elections, the county presidents or their appointees.

Allan Kunimoto MD, chair of the Nominating Committee reported the slate of nominations for elective office and any additional nominations were received from the floor. There were no additional nominations for the office of president-elect or treasurer so there were no speeches from candidates.

Speaker Chinn next received nominations for the Nominating Committee for next year. Those nominated were:

Honolulu County	**J. Camara MD**
	L. Howard MD
	N. Baysa MD
	C. Sonido MD
	G. Soriano MD
Hawaii County	**C. Kadooka MD**
Kauai County	**G. McKenna MD**
Maui County	**R. Stodd MD**
W. Hawaii County	**B. Kimura MD**
Past Presidents	**A. Kunimoto MD**
	S. Wallach MD

Reference Committee referrals and announcements of the appointment of each Reference Committee were made by Speaker Howard. At this time the delegates were reminded of the sign-in procedure for Sunday's election and encouraged to attend the deliberations of the Reference Committees. The House was ordered to stand in recess until 11 am, Sunday, October 8, 1995.

President Fred Holschuh convened the HMA membership meeting at this point and following the completion of business adjourned the HMA membership meeting.

The Annual Meeting was reconvened on Sunday at 11 am. The results of the annual election were announced by the Speaker as follows:

President	**Carl W. Lehman MD**
President-elect	**John Spangler MD**
Treasurer	**Leonard Howard MD**
AMA Delegate	**Calvin Kam MD**
Alternate Delegates	**Carl Lehman MD**
	John Spangler MD
	Allan Kunimoto MD
Speaker of the House	**Herbert K.W. Chinn MD**
Vice Speaker of the House	**Patricia Blanchette MD**
Councilor from Maui	**Jon Betwee MD**
Councilor from Hawaii	**Craig Kadooka MD**
Councilor from Kauai	**Peter Kim MD**
Councilor from W. Hawaii	**Alistair Bairos MD**
Councilors from Honolulu (7)	**Danelo Canete MD**
	Patricia Chinn MD
	Robert Hollison MD
	Charles Kelley MD
	Kim Thorburn MD
	Ronald Wong MD
	Walter Young MD
HMA Peer Review Committee (4)	**Cynthia Goto MD**
	John Houk MD
	Howard Minami MD
	Edwin Montell MD

The remaining election results may be obtained by calling Angela at the HMA office.

Dr Holschuh announced that the 1995 Physician of the Year Award had been presented to **Ernest L. Bade MD** at the Presidential Inauguration banquet the night before.

Dr Bade was presented the Physician of the Year Award for his tireless devotion to the community. The Hilo family physician and geriatrician participated in a World Health Organization-sponsored health study of elderly Okinawans living on the Big Island compared to Okinawans living in Japan and Brazil. He provides free physical exams to youth organizations—Boy Scouts, Pop Warner Football, and Hawaii PAL amateur boxing programs. A past recipient of the Hawaii County Medical Society Physician of the Year Award, Dr Bade shows his care and comfort for *individual* patients, putting patient needs above his own.

The reports of the Reference Committees were then received in order. Highlights of the reports, recommendations and resolutions follow:

1. An ad hoc committee was established to look at restructuring the annual meeting, possibly separating the meeting of the House of Delegates from the scientific session. This commit-

tee will report to the 1996 House of Delegates meeting.

2. The Health Care Access and Economics Committee was retained due to the complex situation regarding managed care at this time.
3. The Managed Care Committee was directed to develop an agenda and meet prior to the next annual meeting.
4 Resolution 19 was approved recommending physician input on any budget meetings that would affect public health.
5. The recommendation of the Executive Director that the HMA and component society leadership officially begin discussion, investigation, review and recommend action to make organized medicine in Hawaii as lean and efficient as possible.
6. The Alcohol and Other Drug Abuse Committee develop an agenda and meet during the year.
7. The Communicable Disease Committee develop an agenda and meet during the year.
8. That the Hawaii Tumor Registry continue its critical operation as the cancer registry for the State of Hawaii and that the HMA Legislative Committee continue to seek increased funding by the State for the Hawaii Tumor Registry.
9. Recommendations of the Pension Committee were adopted as follows:
 - Instruct our pension actuary to provide a dollar figure for all employees for the value of their pension plan vesting as of September 1, 1995, along with an explanation of the plan termination and a disclaimer regarding the dollar amount as it is a moving figure.
 - Terminate the current defined benefit plan with the employees having the option to take their benefit amount, roll over into their own individual retirement account (IRA), or roll over into a new HMA profit-sharing (defined contribution) plan.
 - Create a new HMA profit-sharing (defined contribution) plan.
 - If and when the HMA believes it can afford it, to have HMA contribute the monies due for the current year into the new HMA profit-sharing plan.
10. Comment box regarding criticisms, concerns, and positive input will be available to all physicians by HMA fax and box in the HMA office. These concerns will be evaluated by the Executive Committee/Council and comments made available in the *HMA Newsletter.*
11. Change the name of Hospital Medical Staff Section to Organized Medical Staff Section.
12. Budget recommendations were accepted as follows:
 - The dues for 1996 will be $618, of which $18 of the dues will go toward the *HMJ.*
 - Dues for retired physicians remain at $118 (including *HMJ* subscription) and that voluntary contributions from life physicians be suggested at $118.
 - That the *Hawaii Medical Journal* be complimentary for members.
 - Delete grants from the Interferon and Interleukin projects on Exhibit A.
 - That Egami & Ichikawa be directed to provide manager's notes and meet with the HMA officers and the Finance Committee periodically.
 - It was also recommended and adopted that the Finance Committee investigate a possible program to have a lump sum payment from physicians who retire before age 70 and that the Finance Committee report to Council before the 1996 House of Delegates.

Many other resolutions were presented, debated, changed, amended and otherwise disposed of during the meeting. The complete report will be available in the Speaker's Report to the House.

After completion of old and new business, Dr Johnston installed the newly elected officers of the association. Dr Holschuh turned over the Presidential gavel to the 1995-96 President, **Carl Lehman MD**, who sounded the gavel at 2:35 pm to adjourn the 139th Annual Meeting of the Hawaii Medical Association.



Council Highlights

January 5, 1996
Roger T. Kimura MD

The HMA Council was called to order by Dr Carl W. Lehman, President at 5:33 pm.

Those present were J. Spangler, President-elect; R. Kimura, Secretary; L. Howard, Treasurer; F. Holschuh, Immediate Past President; AMA Delegates: C. Kam, R. Stodd; Alternate AMA Delegate: A. Kunimoto; County President: E. Bade, Hawaii, M. Joshi, Maui, T. Crane, Kauai; Councilors: T. Au, P. Chinn, W. Dang, Jr, P. DeMare, S. Hundahl, C. Kelley, M. Shirasu, K. Thorburn, R. Wong, J. Betwee, B. Shitamoto, P. Kim, C. Kadooka, A. Bairos; Past Presidents: A. Don, G. Goto, S. Wallach, N. Winn; Young Physician Delegate: C. Goto.

HMA Staff: J. Won, N. Jones, B. Kendro, L. Tong, J. Asato, J. Estioko, A. Rogness, recording secretary.

- Dr Lehman reported that as HMA is becoming more involved in new projects with limited staff, some committee functions may need to be delayed as we prioritize our needs and budget staff time.
- The HMA Alliance (HMAA) reported: 1) The HMAA will launch its campaign on Stop America's Violence Everywhere, SAVE; the fund-raising campaign is ongoing and contributions have been received. In October the HMAA received proclamations on SAVE Day from the Mayor of Hawaii County Steve Yamashiro and from Governor Cayetano; 2) HMAA is involved with the Dept of Health in their quest to squelch smoking, the "Tobacco Free-Hawaii" project.

For Action

- A motion was carried by Council that information on Dr David Wong's needle incinerator investment be disseminated to all HMA members via the *HMA Newsletter* for personal investment purposes and that the HMA not invest in the project.
- A motion was carried by Council that the issue of HMA guaranteeing a line of credit of up to $100,000 for the Credential Verification Service venture be referred to the HMA Finance Committee.
- A motion was carried that a reminder be sent in the next mailing to the HMA members that the law which states a patient is to be asked if he or she wants his or her symptoms/diagnosis printed on the label of the prescription bottle is in effect and needs to be followed.
- A motion was carried that Dr Lehman or his appointee look into the matter of the Medical Claims Conciliation Panel being active or not and report to Council at the next meeting and support the reformation of the panel.
- A motion was carried that the HMA contact HMSA regarding an evaluation fee for emergency room non-emergent QUEST patients and that the issue be referred to the HMA Organized Medical Staff Section.
- A motion was carried to refer the draft of the written agreement on an international loan to finance the HMA building to the Finance Committee with a report at the next Council meeting.

Component Society Reports

Hawaii.—Dr E. Bade, President, reported that Hawaii County had its Christmas party on December 10. Ruth Matsuura MD, a Hilo pediatrician was honored as Physician of the Year.

Maui.—Dr M. Joshi, President, reported a good turnout at the Christmas dinner. In February, they will have a speaker on tamoxifen and will be celebrating their secretary's 50th year with the county which will be held on the *Navitek.*

Kauai.—Dr T. Crane, President, reported that his county is very eager to get a jump on the legislative session and would like to have their plan presented to Council when it is formulated.

For Information

The 1995 HMA House of Delegates Speaker's Report.—The report was distributed at the meeting and Dr Howard asked that each Council member review the report and respond to any actions that their committees may need to pursue.

DEA Numbers.—Dr Holschuh received a letter from a concerned physician regarding writing his DEA number on every prescription and/or giving his number over the phone to the pharmacist as a convenience for third-party payers. Dr Holschuh wrote to the Director of the AMA Organized Medical Staff Section, and he responded that the AMA policy is to not write DEA numbers on prescriptions, which was adopted at the June 1994 AMA meeting. The director also will look into this situation further.

Straub Symposium on Prevention and Management of Stroke.—The HMA supports this symposium which will be held March 14 and 15, 1996 at the Ala Moana Hotel Hibiscus Ballroom.

Independent Physician Network.—Dr A. Don reported that Pacific Medical Administration Group (PMAG) and the HMA have agreed to each place $25,000 down to start the IPA and the prospectus is being done. Dr Don would like to show his presentation to the Neighbor Island physicians along with other programs, such as the Peer Review Organization and Credential Verification Service which HMA will be involved in for physicians.

Legislative Committee.—Dr Au reported that there is a twofold concurrent agenda for the Legislative Committee: 1) to continue to meet the immediate needs of reacting to legislative issues as they arise; 2) to have the Legislative Committee active throughout the year. During the legislative session there will be weekly meetings with the core committee members which is open to everyone. The purpose is to hear testimony, prioritize and triage it, and turn it over to the appropriate committees. Three meetings a month will be for the core committee to act on issues, one meeting a month will address long-term project issues. Some of the issues the HMA will be working on include revising loopholes in the current peer review statute, surrogate legislation, and prescriptive authority.

AMA Delegates Report.—Dr Kam prepared a written report and Dr Stodd reported that restructuring the AMA Federation caused the most controversy. Membership is going down on the national level as well as the local level. Loyalty is going more toward specialty groups or toward group associations. Dr Holschuh reported that in regard to the advanced nurse practitioner, the AMA's official policy is straight physician supervision. Dr Holschuh also reported that his resolution approved by Council and brought to the AMA on DUI and blood alcohol levels of .02 was overwhelmingly accepted and was referred to the Board of Trustees for study. He also reported that Jonathan Won, HMA's Executive Director, was honored at the AMA and given a plaque for 30 years of service with the HMA.

Annual Meeting Wrap-up.—Dr Shirasu reported that the scientific program evaluations were positive. The HMA staff was given a round of applause for a job well done.

Peer Review Organization.—Mr Won reported that HCFA will make a determination between March 15 and April 15 on the selection for Hawaii's PRO.

Great Aloha Health and Fitness Expo.—Dr Kimura reported that with physician coverage at the booths at the Expo, the HMA Executive Committee decided to participate. The date of the Expo is from Friday, February 16 to Sunday February 18. The booths were generously donated as a public service by Hawaii Vinyl Supply. More physician volunteers are welcome.

Restructuring Activities.—Dr Lehman discussed possible restructuring of the HMA and asked county societies to consider the question of consolidation into one organization. Resolution No 3 passed at the HMA House of Delegates called for input by each county by July 29. It would be best to receive input by June 1 so the Delegates know before attending the AMA meeting in June.

The meeting adjourned at 8:35 pm.

News and Notes

Henry N. Yokoyama MD

Life in these Parts

Gloria Madamba, internist-humorist, had an 80-year old patient who developed chest pain whenever she took a shower. Through careful questioning, Gloria discovered that the frugal lady took cold showers and saved her hot water for the laundry. The patient was cured when Gloria convinced her that she could save money on medication by showering in hot water and doing the laundry with cold water.

Health QUEST Funds

The anticipated federal budget cuts are expected to cause a $20 million deficit for fiscal 1996 in Health QUEST. State health and human services officials are considering the following drastic measures: a. Cutting dental and vision coverage to save $13 million a year, b. Capping enrollment at 125,000 (29,000 participants will be dropped).

New rules since August 1, 1995—

- A family of four earning $23,172 will pay $80/month.
- Only those below the poverty level of $17,424 pay nothing for coverage.
- Self-employed people will pay half their premiums and those under 21 must list their parents' income.

Watch Cholesterol—Hawaiians Told

A study of Native Hawaiians announced in November at a California meeting of the American Heart Association reveals that Native Hawaiians have two and a half times more heart disease than the general population. The death from heart disease of pure Hawaiians is 525/100,000. Some study participants were fortunately on cholesterol-lowering drugs and had many times lower rates of heart attack and death.

President Ray Itagaki of the Hawaii affiliate of the American Heart Association warns that, "The Native Hawaiians are a group that has to be carefully monitored, carefully watched."

Ray recommends that anyone with cholesterol over 200 should start lifestyle and dietary changes. If in 3 months their cholesterol has not come down, they should try the new medication.

John Cogan, QMC chief of cardiology, observed that the *statins* appear to work best in conjunction with exercise.

KHVH—Paul Harvey on January 8

A pregnant woman was arrested for driving in the car-pool lane without a passenger. She went to court to prove that under California law, the fetus was a person, and therefore a passenger. She won her case. Several weeks later, she was again arrested for the same violation. She lost her argument in court because under California law two persons cannot be behind the wheel.

Hors de Combat

(Excerpts from *Star-Bulletin* writer Helen Altonn's feature article)

> "Let's set up something like the military. If people want welfare, they have to sign up for it, go through a program and learn to take care of themselves. We need programs that help people who are struggling, rather than saying, If you can't make it, come over, we'll do it all for you."

HMA President **Carl Lehman** stunned some people at the November briefing on Medicaid Medicare budget issues (attended by legislators and state and private health care providers) with the idea that the welfare cycle can be broken by putting recipients in government housing for "basic training" with no smoking, alcohol, or illegal drugs.

Ah Quon McElrath, social activist, complained; "Does the doctor think putting these people into barracks is going to have any effect at all? It strips people of dignity and their civil rights."

Carl says, "We have made it attractive to be lazy and do nothing and made it difficult for people to work because they have to pay such high taxes. Able-bodied welfare recipients should be required to work or be dropped from benefits.

Why is it that they cannot afford to buy aspirin or over-the-counter medicine but can find enough money to buy cigarettes, and some find enough money to buy illicit drugs? Yet they demand other citizens pay their way through life.

"Welfare recipients, for example, could be trained to help care for older people needing long-term care. With assistance, many elders could stay at home, instead of going into costly nursing facilities, and learn to take care of themselves."

Boston attorney, Andrew Meyer, Jr, filed two lawsuits against **Ilona Higgins** back in 1984 alleging substandard conduct with the 1979 delivery of two babies at St Margaret's Hospital in Boston's Dorchester section and lost both suits. In 1988, Meyer sent letters to the UH Medical School and the State Board of Medical Examiners attacking Ilona's competence. Ilona sued Meyer in federal court when the state Board of Bar overseers failed to discipline Meyer for unethical conduct. In November 1995, Meyer settled for $585,000 which the *Boston Globe* describes as the largest ever paid by an attorney in such a case. Ilona says, "The suit was never about money. It was about the ethics and professional responsibility. Attorneys need to be held

➤ *Continued on next page*



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responsible for their behavior." (*Maui News*, November 10)

Physician Moves—November

John Vincent Martell, associate professor of UH School of Medicine, moved to Hilo and joined the Hilo Family Practice Center where he will help develop the residency training program.

Pediatrician **Marvin Smith Krober**, specializing in infectious disease, joined the Wahiawa General Hospital staff.

Patrick Lee Ergine, board-certified in internal medicine, general surgery, cardiovascular and thoracic surgery, opened his practice at Kapiolani Medical Center at Pali Momi, Suite 350. Orthopod **Terry G. Smith** resigned from group practice with Orthopedics Associates of Hawaii effective October 16.

Elected, appointed and honored

The HMA Physician of the year was awarded to **Ernest Bade**, Hilo physician by HMA president Fred Holschuh during the annual HMA meeting on Maui. Ernest was honored for his role as medical director of Life Care Center of Hilo; Hilo Medical Center Extended Care Facilities; Interim Health Care, Kau Hospital and Kohala Hospital as well as his roles in other sports and community organizations. Ernest is a member of eight community organizations and recently coordinated a WHO comparative health study of elderly Okinawans living on the Big Island.

Carl Lehman, board-certified in pediatrics, allergy and immunology, was elected president of HMA.

Re 40th Birthday Party

(Gleaned from the *QMC Kam Wing Bulletin Board*)

Dear Larry:

My list of 10 ways you know you're getting old

10. The library won't let you borrow for more than a week—"just in case."
9. You went nude to a costume party and won first place as a "topographical map of California."
8. You keep repeating things.
7. You keep repeating things.
6. You can't jog anymore because Boy Scouts keep trying to help you across the street.
5. (For women) You put your bra on backward and find it fits better.
4. Rand McNally wanted to used your varicose veins as a road map.
3. You read the obituary column every morning to make sure your name is not there.
2. You buy "slip-on shoes" because the laces on the other kind are too short to reach your fingers.
1. And the number one sign you are getting old, you look at members of the other sex but forget what for.

Classified Notices

To place a classified notice:

HMA members.—Please send a signed and typewritten ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in *HMJ* as space is available.

Nonmembers.—Please call 536-7702 for a nonmember form. Rates are $1.50 a word with a minimum of 20 words or $30. Not commissionable. Payment must accompany written order.

Offices For Sale

Practice for sale.—Established medical practice on Oahu. Retiring. Annual net income 90K. Has federal income tax return to show. Selling for 10K. Call (808) 625-1410.

Locum Tenens

Radiologist.—Available on short notice for locum tenens. Full or part time, any island. (808) 875-9794.

Locum tenens available.—Board-certified family practice, 12 years' clinical experience in Hawaii. Deborah C. Love MD; Home phone on Oahu: (808) 637-8611; cellular phone Maui: (808) 281-4713.

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The Weathervane

Russell T. Stodd MD

When it don't rain, the roof don't leak. Who needs any windows on such a sunny day anyway?

CareData of southern California questioned seniors in five plans to determine if seniors were happy with their HMO care. Eighty-four percent of those seniors who were healthy were highly satisfied, but the sicker ones were less pleased. Only 56% of those with poor health were happy with their primary care doctors. Apparently, HMOs give excellent service to those who are not ill.

Human life is only theater—and mostly cheap melodrama at that.

In Illinois, a patient's obstetrician warned her that unless she had a C-section, her baby was likely to die or be born severely retarded. A consultant physician backed up the obstetrician. The patient refused surgery on religious grounds, and the state asked a trial court to override the decision of the mother. No way, ruled the tribunal. "The right to refuse treatment is not diminished during pregnancy, and the potential impact upon the fetus isn't legally relevant." Incidentally, an apparently healthy boy was born from below.

Nothing is so firmly believed as that which we least know.

It seems like only yesterday, but actually it was right after the Civil War when the notion first generated that sugar had lower nutritive value. Later, in 1922 the belief was raised that food containing sugar had an adverse effect on behavior. When the lay media picked up on these irrational theories of empty calories and reactive hyperglycemia, it was only a short step to produce the *Twinkie defense*, in the courtroom, and *functional reactive hypoglycemia* to explain some hyperactive children. Alas for the health food faddists, now a Vanderbilt University study reported in *JAMA* has failed to substantiate the hyperactive theory in children, and it seems calories are still units of measurement.

It's a question of whether we're going to go forward into the future, or past to the back. (D. Quayle)

In Minnesota a proposed law would criminalize good-faith health-care decision making. The bill, called the *Vulnerable Adults Act*, goes beyond anything seen around the country and is designed to protect patients against medical criminal neglect. The problem is that what constitutes a vulnerable adult, and what is criminal neglect is so vague that Minnesota Medical Association has mounted a vigorous campaign to defeat portions of the act. The bill's proponents have said that physicians should trust them to implement the act fairly. MMA leaders said they could not, and that the attraction to an ambitious, headline-seeking prosecutor might be just too tempting. A headline seeking attorney—could that be?

Avoid falsehoods like the plague except in matters of taxation.

As everyone knows, in 1993 Hillary Rodham Clinton, wife of the current President, assembled a carefully selected task force in an attempt to forge a national health care plan. To enhance the effort, a closed- door policy was established, but ultimately that was ruled legally unacceptable. As that dispute was dragged through the courts, the Clinton administration claimed the cost of the task force was only $100,000. Now all the documents have been released, and the actual cost to taxpayers for this bloated, pretentious albatross was $13.8 million.

Being rich is having money; being wealthy is having time.

While average physician incomes have flattened in the 1990s and now have dropped this past year (3.8%), the same does not hold true for professional athletes. Everything is up: signing bonuses, endorsement money, and winning purses. Michael Jordan *earned* $153 million in endorsements in the past 10 years, Ki-Jana Carter was paid $7 million to sign with the Cincinnati Bengals but never played a game, and Mike Tyson received $40 million for his 89 seconds of effort against palooka Peter McNeeley. Arnold Palmer and Jack Nicklaus both received over $60 million in endorsements the past decade, so competing in the senior golf tournaments is basically a hobby. Meanwhile back at the PPO, HMO medical milieu—one might postulate that our cultural sense of values is slightly askew.

It is not what a lawyer tells me I may do, but what humanity, reason and justice tell me I ought to do.

If you have failed to communicate with your patient, bear in mind that you may be in violation of the Americans with Disabilities Act (ADA). A complaint was brought in Idaho when a woman who cannot read lips or written words brought her daughter with strabismus to the doctor. On the first visit a sign language interpreter was engaged, but for subsequent office visits the requests for an interpreter were refused. The parents filed a complaint with the U.S. Department of Justice citing the ADA, and if the department proceeds with a lawsuit against the physicians, they could be penalized up to $50,000.

Is this called the heinie maneuver?

The doctor thought it was just a little horseplay after surgery. He finished closing the patient's surgical wound with a surgical stapler while the circulating nurse was bending over to pick up a dropped sponge. Apparently seized by an urge for target practice, he shot the nurse in the backside with the staple gun. He claimed it was all intended as a little operating room humor, but the nurse was not amused. A New Orleans jury awarded her $5,000 in damages.

Addenda

- 76,000 Americans were injured using in-line skates in 1994, with fractures accounting for 40% of the damage.
- Cost of 100 aspirin tablets in Tokyo $36.57; in Toronto $5.04.
- Smokers in China spend an average of 17% of household income on cigarettes.
- If you have to shoot someone doing pantomine, you must use a silencer (Herb Caen). But remember, a mime is a terrible thing to waste.

Aloha and keep the faith—rts ■

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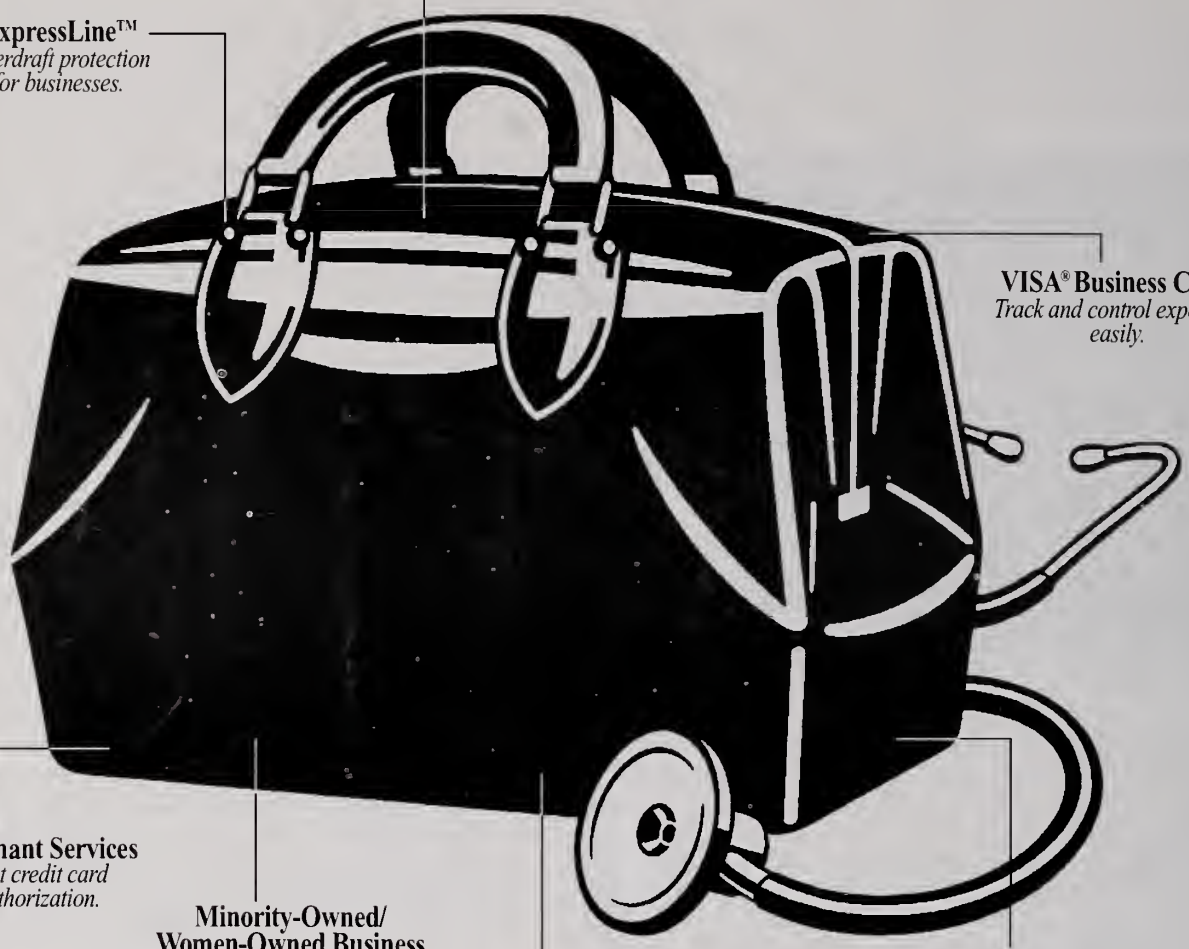
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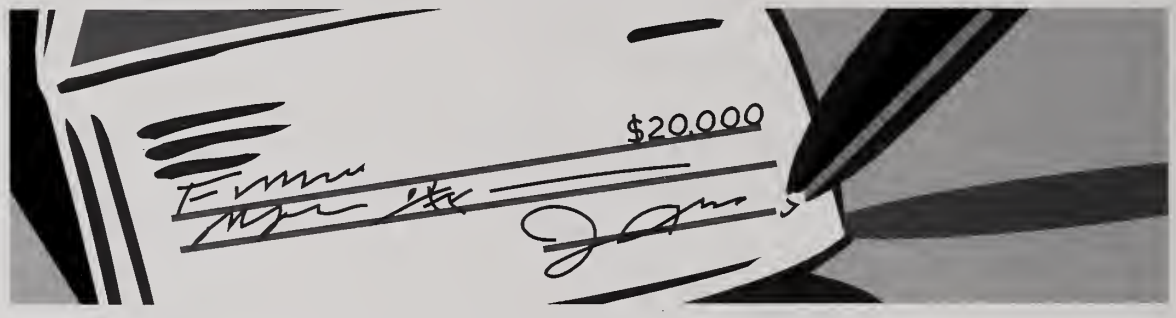


Special Issue on Vog

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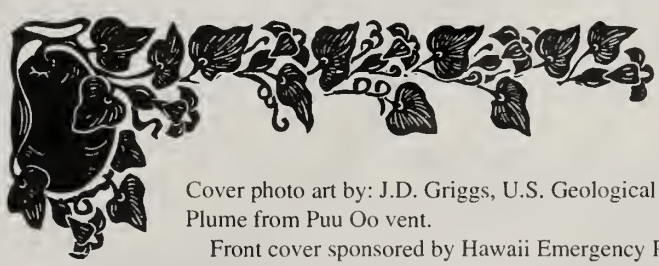
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Editorial

Norman Goldstein MD

Vog in Hawaii

This issue of the *Journal* focuses on a major problem on the Big Island of Hawaii—on all our islands and for our neighbors in the Pacific.

The earliest reference to vog appeared in a newspaper article in 1950 (*Honolulu Star Bulletin*. January 19, 1950:1). Capt Charles K. Stidd, commanding officer of the Hawaii Air National Guard weather station described his vog observations (*Honolulu Star Bulletin*. June 16, 1959:1).

And Dr Nathan Burbane, professor of environmental health at the UH School of Public Health noted in 1969 the concentration of vog (volcano-induced fog) is not enough at the moment to even cause minor irritation. "It may be that two or three very young children with other allergies may have some respiratory discomfort, but the chance of that happening with the present concentration would be very rare, I would say. Meanwhile, it sure is depressing isn't it?"

It is more than depressing! It is dangerous! Hawaii has the highest asthma death rate in the United States (*J Allergy Clin Immunol.* 84:421-34). The problem of chronic obstructive pulmonary disease (COPD) and asthma has been exhaustively studied by Mannino, Ruben, the Holschuhs, and Wilson and is reported in this issue of the *Journal.*

This study represents a record for our *Journal.* It took three years of reviews, revisions and especially perseverance by David Mannino MD and his co-workers to obtain acceptance to publish this excellent report.

We also present some abstracts of a vog symposium on September 12, 1995 sponsored by the Department of Health.

Dr Bruce Anderson, Deputy Director for Environmental Health, Department of Health, and Dr Kenneth Olden, Director of the National Institute for Environmental Health Science and National Toxicology Program, will continue the studies of the health effects of vog.



Guest Editor

Frederick C. Holschuh MD

In the latter part of the 1980s, when the eruption of Kilauea Volcano had been continuous for more than five years, Hawaii County Council Chair Russell Kokubun and Civil Defense Chief Harry Kim called together a task force on the eruption's effects on the people of our island. I was privileged to be asked to serve on this committee which became known as the Hawaii County Vog Authority. During the years that the Vog group met to discuss and study the effects of vog, we received reports on types of volcanoes, geophysics, air quality, weather patterns, acid rain, agriculture, and human health. Many national and international experts on volcanoes, and local authorities on pulmonary disease assisted the group. I began to report patient encounters in the Hilo Medical Center Emergency Department where I had noticed increased respiratory tract problems and upper respiratory complaints during "bad vog days." I often heard people with asthma and COPD tell me they would sometimes sit in air conditioned shopping malls for relief.

Dr Sam Ruben, then Hawaii County district health officer, and I planned a study of ER visits around the island to include two years prior to the eruption and then annually until the study ended. ER visits at the five community hospitals are logged manually in log books. More than 200,000 patient encounters were received by the student investigators who were supported by grants and assisted by the Lung Association's Big Island office. The culmination of this investigation is summarized in our article in this issue of the *Journal.*

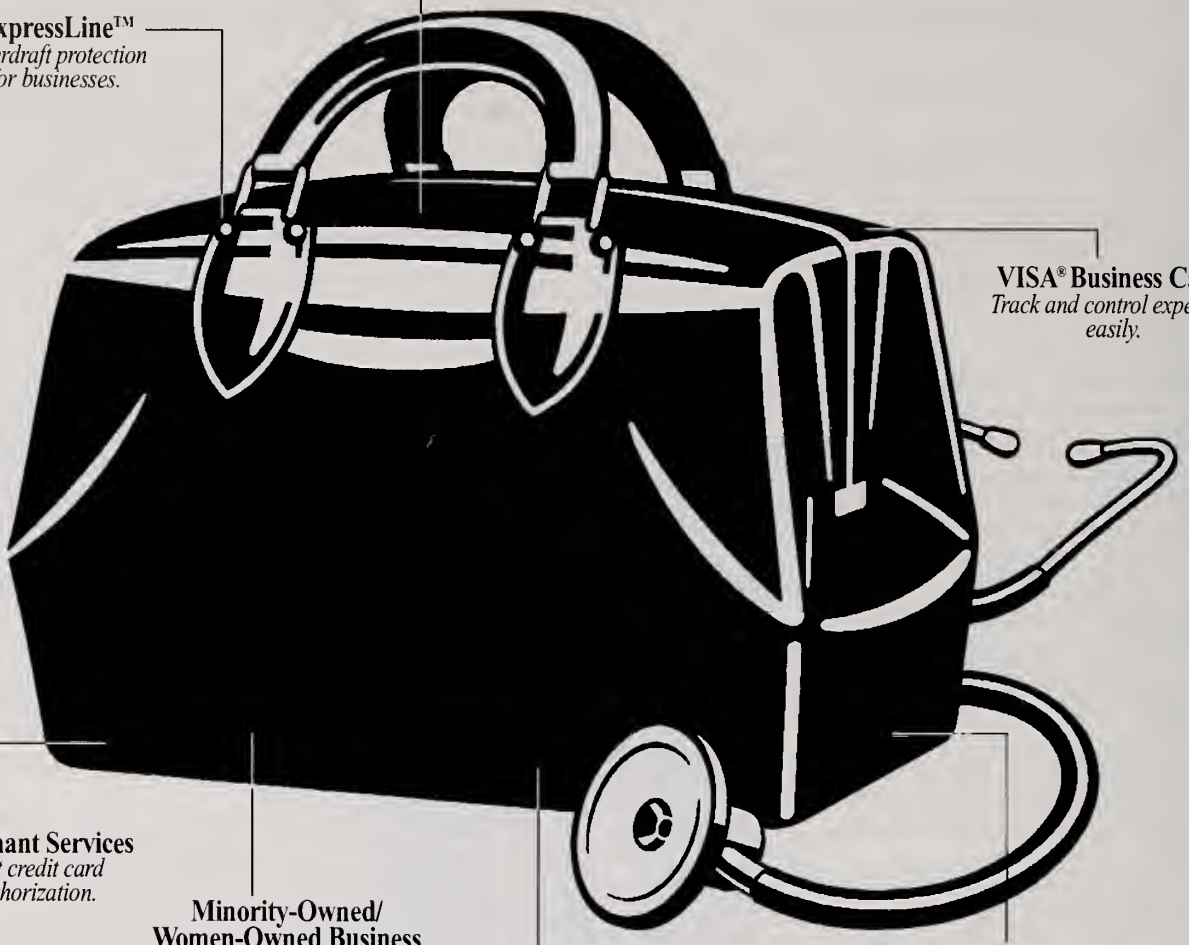
I still practice in the Hilo Medical Center Emergency Department and continue to see the effects of vog on human health. Some years ago, Dr Bob Arnott of the "CBS Morning News" came to Hilo to interview me about vog. A nationally aired segment mentioned vog effects although my comments were not as sensational as he would have liked. What I told him, and continue to tell anyone who will listen, including all asthma and COPD patients I see is, "We can do little about vog, but we can do everything about smoking cessation."

Two interesting bits of information from the meetings of the Vog Authority. An expert on volcanic eruptions, when asked how long we could expect this eruption to continue, said, "In my estimation, it could be three days to 300 years." Another person when asked what the ancient Hawaiians did during prolonged eruptions answered, "They moved."

With some exceptions, we generally can't expect people to move, but we can do things to help. We can assist with a "vog index" type daily air quality report (the Department of Health is working on this). We can determine if schools in heavy vog areas should be air conditioned, and do everything we can to control tobacco use.

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HMA President's Message

Carl W. Lehman MD

The problem of vog exposure is of special interest to me. As an allergist, I have been interested in the effects of various types of smoke on the allergic patient, especially the asthmatic patient who is often allergic or hyperreactive to exposure to many chemicals. I studied the effects and skin sensitivity of patients exposed to sugarcane smoke and also to firecracker smoke and published articles in the June and November 1976 issues of the HMJ. At that time, I wondered why an extract of sugarcane smoke could produce positive skin-test reactions, but the firecracker smoke extract did not. Yet, most severe allergy patients dread exposure to firecracker smoke. Subsequently the study of metasulfites, sulfur dioxide, and related compounds revealed that 10% to 15% of asthmatics are highly sensitive to sulfites, often not an allergic reaction but probably due to a deficiency of sulfite oxidase. They further showed that administering vitamin C or cyanocobalamine (Vitamin B_{12}) decreased the patient's sensitivity. I surmise that firecracker smoke and vog have a high concentration of sulfur dioxide.

I have consulted in Hilo one or two days every month for more than 20 years. Aggravation of allergic symptoms and asthma from exposure to vog have been perceived by many of these patients. Based on the above information, I often have prescribed vitamin C 2000 mg to 3000 mg per day for patients exposed to vog. I have never studied the results, but I believe a good double-blind study should be done to further evaluate this premise.

In last month's HMJ, Dr Yokoyama's column included a reprint of my comments about the Medicare-Medicaid Entitlement Programs in the *Honolulu Star Bulletin*. That article evolved as a consequence of a presentation I had made in November 1995 at a half-day session organized by Representative Suzanne Chun-Oakland. I was asked for any proposed solutions to keep the Medicare and Medicaid Programs viable with governmental cutbacks in funding.

I believe there are multiple components that make the welfare program unaffordable. Many speakers at that conference have continued to meet regularly to further discuss the problems with Dr Susan Chandler. We keep addressing the theme of budgetary cutbacks. I say, help welfare recipients become self-sufficient and individually responsible so they no longer need welfare assistance. We are likely to pay more in criminal costs than we save by dropping welfare recipients from the program without first training them to be self-sufficient. A dependency on the system has been created by giving monetary assistance without providing training and assistance in character development. These changes could not be readily implemented, but in the long run, I believe are necessary.

I believe we need a mechanism within our capitalistic society to deal with individuals who depend on the welfare program, which includes Medicaid. The Medicaid system simply cannot provide the ever-increasing demands with concomitant decreased funding. I reported that physicians in Hawaii are treating these patients at or near operating costs, that further reduction of reimbursements to physicians is likely to force more physicians to stop participating with Medicaid and create a real access to care problem.

I recommend that programs be developed that require a welfare recipient to agree to work and/or be job trained in order to become self-sufficient.

Our society should neither allow nor support illicit drug use and unhealthy life styles by welfare recipients. In my opinion, such recipients must be willing to accept the responsibility of complying with rules or receive no benefits.

Alliance

Susan L. Foo
HMA Alliance Vice President
Health Projects



L-R.—Susan Foo, Dan Canete MD, Ann Canete, Senator Richard Matsuura, Ruth Matsuura MD, Carol Lehman, Carl Lehman MD, Cherlita Gutteling.

Happy, Healthy New Year!
Kung Hay Fat Choy!

This year marks the 48th anniversary of the Hawaii Medical Association Alliance. Through the dedication and public service commitment of the spouses and medical friends of the HMA Alliance, a positive impact has been made in our community. I am delighted to report that the following 1995 Health Projects have been completed or are ongoing for 1996.

- Fundraising for the Cancer Society and Hospice Hawaii.
- Letter-writing campaign to President Clinton to ban the nuclear testing by France in the South Pacific has been met with a great deal of support by our school children and our community at large.
- The MADD Red Ribbon Campaign to prevent needless injuries and deaths due to drunk drivers was most successful, with thousands of red ribbons distributed to doctor's offices for their patients and staff.
- The collection of usable toys and clothing for the Aloha Medical Mission to be sent to the needy families who suffered severely from the recent typhoon in the Philippines.

HMAA is dedicated to the SAVE campaign (Stop America's Violence Everywhere) to make physicians and their spouses prominent advocates of domestic peace. Please contribute to the HMAA fund for domestic violence awareness programs. The children and families in our community need our help.

Mahalo nui loa for your continued support.

Abstracts from the Vog Symposium

September 12, 1995
Sponsored by the Hawaii Department of Health

Vog Overview and Background

Volcanic emissions from the Kilauea East Rift Zone are causing the most obvious air pollution problem in Hawaii today. On *Kona wind* days, volcanic haze is clearly visible hundreds of miles away on Oahu. The characteristics and dispersion patterns of volcanic emissions have been well-defined; however, studies on possible health effects are inconclusive.

Kilauea East Rift Zone has been erupting almost continually since January, 1983. Everyday the volcano produces more than 1,000 tons of sulfur dioxide. In fact, the U.S. Environmental Protection Agency reports the only recent violations of air quality standards for sulfur dioxide in the region were the result of naturally occurring volcanic emissions at the Hawaii Volcanoes National Park ("Breathing Easier: a Report by EPA on Air Quality in California, Arizona, Nevada and Hawaii").

Air quality monitoring data from other areas on the Big Island are very limited; however, data collected by the Department of Health suggest that state and federal ambient air quality standards are not being exceeded in Kona or other areas of the Big Island even under the worst conditions. Nevertheless, sulfur dioxide, fine particles in the air, and various pollutant mixtures, such as sulfates and acid aerosols may individually or in combination present a significant risk.

Of special interest is the possibility that sulfur dioxide and other sulfur compounds are combining with oxygen and water to form sulfuric acid mists. These acid mists can irritate the respiratory tracts of humans and animals. At present, there are no air quality standards to judge the degree of health risks posed by these pollutant mixtures.

Since 1983, the Department of Health has received hundreds of calls from residents and visitors concerned about respiratory problems associated with exposure to volcanic emissions (vog). Anecdotal reports by doctors also support the contention that these pollutants may affect breathing and aggravate existing chronic respiratory and cardiovascular diseases. Sensitive individuals may include asthmatics, individuals with bronchitis or emphysema, possibly children, and the elderly. Unfortunately, existing records have been found to be incomplete and inadequate to characterize health risks. Thus, studies completed to date have been largely inconclusive.

This special issue of the *Hawaii Medical Journal* includes abstracts of recent air quality and health studies conducted on vog, and they represent the current state of understanding of the subject. Although studies on health risks to date are inconclusive, all involved in the symposium agreed that further work is needed to better characterize health risks.

Obviously, nothing practical can be done to mitigate the source; however, it is important that the Department of Health and other agencies further define current risks so that appropriate intervention strategies can be developed. With a firm scientific foundation, we will be in a much better position to address public health concerns associated with vog.

Bruce S. Anderson PhD
Deputy Director for Environmental Health
Hawaii Department of Health

Airflow Over the Island of Hawaii

Pertubations induced by the airflow past single isolated mountains include a variety of phenomena: flow splitting and flow deceleration on the windward side, mountain wakes in the lee side, etc. In addition, the airflow is affected by the diurnal heating cycle. From July 11 to August 24, 1990, the Hawaiian Rainband Project (HaRP) was conducted over the island of Hawaii to study the mesoscale airflow around the island, and the dynamics of early morning rainbands offshore of Hilo. The mesoscale airflow over the island summarized in this report is based on the data collected from surface stations and aircraft observations during HaRP.

Island blocking as revealed by the mean surface airflow

The mean trade-wind sounding taken by aircraft over the ocean east of Hilo during HaRP exhibits east-northeast trade winds on the order of 6 to 9 meters per second. Along the windward coast, flow splitting occurs in the Hilo Bay area. The airflow moves around the island with northeasterlies along the northeastern coast and southeasterlies along the northeastern coast. In addition to northern and southern tips of the island, strong surface winds also are found in the Humuula Saddle between Mauna Loa and Mauna Kea and in the Waimea Saddle between the Kohala Mountains and Mauna Kea. In both regions, the airflow moves around the mountains and channels through the saddle. On the windward slope, the incoming flow is decelerated significantly as it approaches the island. In the lee side, the trade winds are completely blocked by Mauna Kea and Mauna Loa with calm winds.

Nighttime and daytime flow regimes

The surface airflow is strongly modulated by the diurnal heating cycle. At night, much of the island has a downslope wind component except in the high wind regions: northern tip, southern tip, Waimea Saddle, and Humuula Saddle. The flow direction along the northeastern and southeastern coasts shows that the trade winds are being forced to move around the island.

On the windward slopes west of Hilo, on the Kona coast and along the Waikoloa coast downstream of the Waimea Saddle, the wind direction of the daytime flow regime is about 180° out of phase with

the nighttime flow regime. In these regions, the wind flow has a large upslope component during the day. Pronounced upslope flow also is observed at Mauna Loa Observatory, on the southeastern flank of Mauna Loa, and along the Kona coast as a result of solar heating.

Wake vortices

The wake consists of two elongated counterrotating quasi-steady eddies that give rise to a wide region of strong reverse flow along the wake axis. The reverse flow extends westward from the west coast of Hawaii a distance of about 200 km. A cloud line extends along the wake axis and sometime broadens considerably farther downstream. Aerosol concentration in the southerly eddy is elevated due to the entertainment of Kilauea plume. Strong shear zones, trailing westward from the northern and southern tips of the island delineate the accelerated trade winds and air trapped in the recirculating wake.

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Dr Yi-Leng Chen
Department of Meteorology
University of Hawaii

Atmospheric Structure Around the Big Island and How It Affects Vog Flow

Relative to the size of the Earth, the thickness of the atmosphere is comparable to a sheet of Handiwrap covering a one foot diameter globe. Half of the Earth's atmospheric mass exists below 16,000 ft altitude. In short, the atmosphere is thin.

This thin layer of air is naturally divided into a number of discrete vertical regions like successive floors in a four-story building. The equivalent of the first floor within the atmosphere is called the boundary layer. In the atmosphere, air normally gets colder with height, but there are situations where the reverse is true, these regions are called temperature inversion layers. In Hawaii, the base of the boundary layer is at sea level and the top is generally in the region of 6,000 ft (~1 mile) above sea level at a strong (up to 6° C) temperature inversion. This inversion produces the top of the lowest cloud layer observed around the islands and separates the boundary layer from the free troposphere.

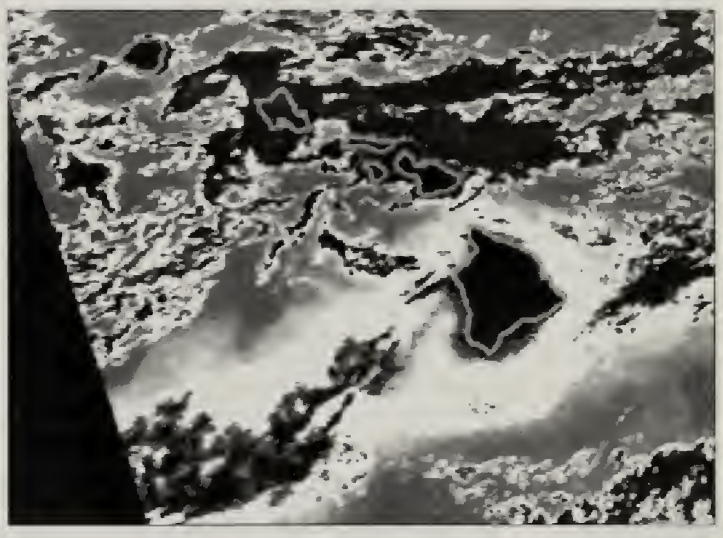
The free troposphere extends from the top of the boundary layer to another temperature inversion called the tropospause. The tropopause is usually observed at around 50,000 ft over Hawaii. Above the tropopause is the stratosphere.

The vog experienced in Hawaii is injected into the boundary layer and is for the most part trapped there. Vog, the same as clouds, is generally unable to penetrate the inversion layer; thus, the vog is carried along by the prevailing low-level trade winds from the northeast when blowing in strength. In the lee of Mauna Loa, eddies in the trade-wind flow are capable of carrying the vog along the Kona and Kohala coasts. Occasionally the vog is carried to Neighbor Islands when the boundary layer flow is other than the normal trades.

Under upslope conditions, whereby a thin layer of warm, moist boundary layer air flows up the side of Mauna Loa due to daytime heating of the dark lava, vog may be drawn into the free troposphere and carried up to Mauna Loa Observatory (11,400 ft). In so doing, the vog is pulled up the slopes from near sea level and drawn across areas not normally exposed to vog.

Dr Russ Schnell
Director
Mauna Loa Observatory
NOAA

VOG Concentrations from Satellite



An AVHRR image (2/95) processed to obtain the aerosol optical concentration. In this image, island downslope nighttime winds have pushed some of the plume to the east while the majority is being carried to the southwest by the trades which are beginning to set in. The Kilauea Volcano plume is frequent but not always present in processed satellite images suggesting emissions are somewhat episodic. This image was collected by Pierre Flament and processed by John Porter (School of Ocean and Earth Science, University of Hawaii at Manoa).

Over the past few years we have developed algorithms that can derive aerosol optical depths from AVHRR satellites. These aerosol optical depths clearly show the Kilauea vog plume as it drifts downwind from the island of Hawaii. While the AVHRR satellite is useful for case studies, it is limited by the fact that it passes Hawaii only twice a day and often sun-glint conditions prevent the retrieval of the aerosol optical depth (particularly in the summer).

In the near future, the new GOES8 satellite will come on-line. This satellite will be improved (compared to previous GOES satellites) and will have sensor digitization similar to the AVHRR satellites (10 bits over 0 to 100% albedo). Therefore, this satellite will be useful for deriving the aerosol optical depth. A particular advantage of this satellite is the fact that it is geostationary, which means it will always be looking down on the Hawaiian Islands at the same viewing angle. Instead of taking images once or twice a day, it will provide images every hour and more frequently on occasion. If successful in obtaining funding, we will be providing aerosol optical depth images from an anonymous ftp (file transfer protocol) site where users could access the images freely.

by John N. Porter
Hawaii Institute of Geophysics
School of Ocean and Earth Science and Technology
University of Hawaii at Manoa

Vog Size Distributions, Optical Effects, and Spatial Variability

Vog is primarily a sulfate aerosol with a significant amount of associated water that varies with ambient relative humidity. It is usually mixed into the background aerosol and has a submicrometer size distribution with a mass peak near 0.35 μm. This size is particularly effective for scattering visible light, making light scattering measurements a rapid and reasonable surrogate for inferring the mass concentration of the vog aerosol. Light scattering measurements made every few seconds reveal marked variability in the vog structure over both horizontal and vertical scales. Factor of 10 changes in concentration were observed over time periods of less than one hour at the coastal site of Cape Kumukahi on the Big Island. Measurements from light aircraft reveal vertical gradients that can also increase by a factor of 10 between the surface and the trade-wind inversion. Under appropriate meteorological conditions, these high concentrations aloft also can mix down to the surface. Temperature changes during the day vary relative humidity in ways that can result in changes in visibility for the same sulfate concentration. These factors must be considered when designing a sampling strategy or interpreting the results. In relation to potential health effects, during normal inhalation the hygroscopic growth of this vog, aerosol will grow in response to the near 100% humidity in the airways. Deposition determinations suggests that about one-third of the observed vog aerosol will be retained in the airways and lungs.

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National Aeronautics and Space Administration (NASA)
Office of Naval Research (ONR)

Antony D. Clarke and John Porter
School of Ocean and Earth Science and Technology
University of Hawaii

Volcanic Emissions from Kilauea and Their Effect on Air Quality

Kilauea Volcano currently releases between 350 metric tonnes per day (T/D) of sulfur dioxide (SO_2) during eruptive pauses, and 1850 T/D during active eruption. Metric tonnes equal one metric ton or 1000 kilograms. Of this, between 90 T/D and 260 T/D are emitted from the summit and the balance from the East Rift Zone eruptive area. The volcano also directly releases water vapor, small particles, metals, and lesser amounts of other gases, including hydrogen sulfide, hydrogen chloride, hydrogen fluoride. This gas and particle mixture combines with air and sunlight to produce the hazy atmospheric condition known as vog: a combination of gases, sulfate aerosols including among others, sulfuric acid, ammonium sulfate, and ammonium hydrogen sulfate. Gas release of another form occurs at locations where lava enters the ocean. Molten lava (110° C) violently boils sea water to dryness and decomposes it, leading to a series of chemical reactions that produce a voluminous plume cloud containing a mixture of hydrocloric acid and concentrated seawater. This condition produces a localized atmospheric hazard known as lava haze or laze which can contain as much as 10 to 15 parts per million of hydrochloric acid. The geographic fate of this pollution is primarily a function of meteorology, especially wind speed and wind direction. Typically, northeasterly trade winds transport vog and to some extent laze plumes to the southern tip of the island where wind patterns wrap around, sending vog up the Kona coast. Here, vog becomes trapped by onshore/offshore winds, affecting populations in west Hawaii. During periods of Kona winds, primarily winter months, the eastern half of the island receives more of the vog.

Jeff Sutton PhD and Tamar Elias
U.S. Geological Survey
Hawaiian Volcano Observatory
Hawaii Volcanoes National Park

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Harry Kim

HEPA is pleased and proud to honor Hawaii County Civil Defense administrator Harry Kim. Mr Kim was presented a special award by the Hawaii Medical Association at its 1994 annual meeting during the installation of the HMA President, HEPA co-founder Dr Fred Holschuh. Because of a longstanding association with Mr Kim and his friendship and affection for him, Dr Holschuh asked that he be allowed to write some comments in this recognition of Harry Kim. Here are his comments:

It is fitting that Harry Kim be honored in this issue of the *Hawaii Medical Journal* featuring the results of a study on the health effects of vog. I have known Harry Kim for many years and was privileged to serve with him and others on the Hawaii County Vog Authority. His concerns for the people of our island and our state have led to many positive approaches in dealing not only with vog and the destruction of Kalapana, but the consequences of all potential disasters affecting human safety. Whether it is a storm, flood, fire, earthquake, drought, or other disaster, we all rest easier knowing Harry is on top of these situations. We all have heard Harry's calming voice on Big Island radio with his Civil Defense announcements.

Harry Kim was aware of the potential health effects of vog and laze (hydrochloric acid vapor emitted when the lava enters the ocean) and said it was the duty of public health officials to evaluate and warn people of problems. He was constantly on the scene at the command post at Kalapana Beach Park during the heart-wrenching destruction of Kalapana. My wife Diane and I saw Kalapana burn, saw the Painted Church moved away, flew over the flow, watched with sadness as the people's lives were forever altered, and above all, were aware that Harry was always there. I can still envision him standing with fire officials, talking to the press, conferring with his staff, speaking with federal and state officials, and praying during religious ceremonies. The most vivid memory I have of Harry, however, is of him standing with his arm around a young woman's shoulders, sharing her grief when her home vanished under the lava's march to the sea.



Harry Kim directs the moving of the Star-of-the-Sea Painted Church.
Photo by D. Weisel, U.S. Geological Survey

Harry Kim was misty eyed, as we all were, when the Hawaiian musical group that played at the HMA Annual Meeting dedicated the song "Kalapana" to him. He shed tears for the people of Kalapana and opened his heart to them. The whole state opened their hearts to Harry Kim.

Harry, my friend, it is with great pride and humility that HEPA is pleased to join the people of the Big Island in saluting you and thanking you for all you do for all of us.

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Emergency Department Visits and Hospitalizations for Respiratory Disease on the Island of Hawaii, 1981 to 1991

David M. Mannino MD,* Samuel Ruben MD, MPH,** Fred C. Holschuh MD,†
Timothy C. Holschuh, Michael D. Wilson, Tami Holschuh

This study examined trends in and patterns of emergency department visits and hospitalizations for respiratory disease on the island of Hawaii from 1981 to 1991. We found that emergency department visit rates and hospitalization rates for both asthma and COPD for 1987 to 1991 increased in all regions of the island in comparison with such rates for 1981 to 1986. Rates of emergency department visits and hospitalizations for chronic obstructive pulmonary disease or COPD, but not asthma, were significantly higher in the high-exposure Kona side of the island than in the intermittent-exposure Hilo side of the island during 1983 and 1988 to 1990. We also found that during the weeks that winds were from the west, blowing volcanic air pollution toward Hilo, emergency department visits for asthma increased 15%. Some of the results of our study support the hypothesis that volcanic air pollution affects respiratory health on the island of Hawaii, while other results do not. Any future studies should include measurements of air pollutant levels.

Introduction

Morbidity and mortality among people with asthma or COPD continue to increase in the United States.[1,2] Hawaii has one of the highest asthma death rates in the United States.[3] Many factors may contribute to this problem, including lack of access to medical care, inappropriate use of medications, exposure to allergens, and poor air quality.[4] We undertook this study of emergency department visits and hospitalizations for exacerbations of asthma and COPD among persons living on the island of Hawaii to determine the possible effect of the change in air quality that occurred in 1986 as a result of the eruption of Hawaii's Kilauea Volcano.

Kilauea Volcano has been active intermittently since 1983 and continuously since 1986. The main volcano and its vents produce about 1200 tons of sulfur dioxide gas daily. Prevailing winds blow most of this gas, along with its oxidation products, to the western side of the island where Kona is located. The island's main population center, Hilo, is located about 40 miles east of the Kilauea Volcano. Occasionally the winds reverse and blow from the west to the east, toward Hilo. During 1989 to 1990 mean levels of particulates with an aerodynamic diameter of less than 10 μm on the Kona and Hilo sides of the island were similar (11.5 $\mu g/m^3$ and 10.7 $\mu g/m^3$, respectively), whereas sulfate levels (which are thought to be related to volcano-generated air pollution) were higher on the Kona side (4.7 $\mu g/m^3$) than on the Hilo side (1.8 $\mu g/m^3$) of the island.[5]

In the first part of this study we examined trends in the rates of emergency department visits and hospitalizations from the emergency department for asthma and COPD that occurred on the island of Hawaii from 1981 to 1991. In the second part of this study we examined weekly variations in emergency department visits for asthma that occurred at Hilo Hospital from 1981 to 1991. For the years 1986 to 1991, the years for which we have meteorologic data available, we examined how wind speed, wind direction, and temperature affected emergency department visits for asthma at Hilo Hospital.

Methods Part I

Researchers extracted records from emergency department log books in four of five hospitals (Hilo, Kau, Kona, Kohala) on the island of Hawaii for the period from January 1, 1981 to September 30, 1991. The fifth hospital at Honokaa did not maintain an emergency department log. We extracted data on all patients listed in the emergency department log book and whose discharge diagnosis mentioned either asthma, chronic bronchitis, or emphysema. The data extracted included diagnoses, age, sex, town of residence, hospital visited, date and time of visit, and disposition. Because we did not extract personal identifiers, it is possible that the same person could have been counted on several different occasions. People who were not residents of the island of Hawaii were coded as either being from other islands in the Hawaiian archipelago, from the mainland United States, or from other countries.

We recoded all of the data entries to make the diagnoses uniform and to make the town recorded conform to a standard census district. The diagnoses were coded as either a primary or secondary diagnosis of asthma, or a primary or secondary diagnosis of COPD. Each entry had only one diagnosis, and in those cases where both asthma and COPD were listed in the discharge diagnoses, we used the diagnosis that appeared first. We then entered the recoded data into a computerized data set and verified the data manually using the data-entry sheets.

We used census data from both the 1980 and 1990 U.S. Census.

*National Center for Environmental Health
Centers for Disease Control and Prevention (CDC)
Atlanta, Georgia
**Hawaii State Department of Health, Honolulu.
†Hilo Hospital, Hawaii

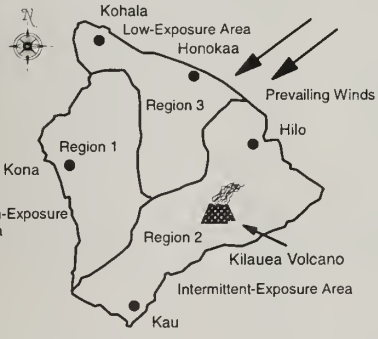
Correspondence to:
David M. Mannino MD
National Center for Environmental Health
Centers for Disease Control and Prevention
4770 Buford Highway, Mail Stop F-39
Atlanta, Georgia 30341-3274.
Phone: (770) 488-7313
Fax: (770) 488-7335

We determined annual intercensal population estimates for each of the 12 census districts on the island by linear interpolation, using 1980 and 1990 age-distribution breakdowns for each census district to estimate the population size for each age group from 1980 to 1991. We used the population estimates to calculate annual age-adjusted and population-adjusted rates.

We divided the island into three regions on the basis of presumed exposure of the population of each area to volcanic air pollution (high, intermittent, or low), along census tract lines (Fig 1). This classification was made on the basis of the consensus of two clinicians who treat patients on the island. Population-based air-pollution data were not available for the years 1981 to 1991.

We calculated annual rates of emergency department visits for asthma (as either the primary or secondary diagnosis) and COPD (as either the primary or secondary diagnosis) for seven age groups in each of these regions. We then calculated the age-adjusted annual rate for each region and the rate ratio (RR) and its 95% confidence intervals (CIs), comparing the period from 1987 to 1991 with the period 1981 to 1986, for each age group in each region and then for each region, using an age adjustment.[6] We used the statistical program SAS (SAS Institute, Cary, NC) for these analyses. Additionally, we calculated annual ratios between the high-exposure region and the intermittent-exposure region using a weighted Mantel-Haenszel stratified analysis available in Epi-Info 5.01 (Centers for Disease Control and Prevention, Atlanta, Ga). We did not calculate annual rate ratios between the low-exposure region and either of the other regions because we did not have data from one hospital that was located in the low-exposure region.

Fig 1.—Map of the island of Hawaii showing Kilauea Volcano, the three exposure regions, and the locations of the five hospitals.



Methods Part II

We used the same emergency room data base described above in this part of the study, but limited our analysis to patients who were treated at the Hilo Hospital emergency department and had a diagnosis of asthma, reactive airways disease or related conditions.

Data on volcanic activity over the study period were obtained from researchers at the U.S. Geologic Survey (Terry Gerlach, U.S. Geologic Survey, August 1993).

Meteorologic data were obtained from Hawaii Volcanoes National Park. A weather station has been operational from September 1986 to the present at a site near Kilauea Volcano. This weather station, which is at an elevation of approximately 4,000 feet, is not influenced by daily variations in wind direction (oceanward in the evening and landward during the day) that affects weather stations close to the coast of an island. We used hourly wind direction, hourly wind speed, and hourly temperature. For each hour, we classified the wind direction as blowing from the west (compass direction between 170° and 340°), blowing from the east (compass direction between 0° and 170°), or neither. We classified an hourly wind speed as low if it was less than the 25th percentile of all the hourly wind speeds (3.9 miles per hour) and classified an hourly temperature as low if it was less than the 25th percentile of all the hourly temperatures (13.5° centigrade). We then summed wind direction from the west and east, low wind speed, and low temperature for each day.

We summed both emergency department visits and meteorologic factors over a 7-day period (Saturday to Friday) to determine weekly counts. For the meteorologic factors, we then divided the sum by the total number of hours that week that the variable was measured to determine a proportion. To calculate categorical variables for meteorologic factors, we determined the highest quartile for wind direction from the west (greater than 10.8% of total hours per week), and the median for low wind speed (15.0% of total hours per week) and low temperature (17.8% of total hours per week) and classified each week accordingly. We also determined quartiles of the wind speed and temperature factors, which we used in the linear regressions.

We determined monthly and annual emergency department visits for asthma. We used 1980 and 1990 census data to estimate annual populations for the region that Hilo Hospital serves, and used these estimates to adjust the visits in the years 1982 to 1991 to the 1981 population.

Statistical analyses were done using the statistical programs SAS and SPIDA (Statistical Computing Laboratory, New South Wales, Australia). We calculated the correlation coefficients between weekly emergency department visits and the meteorologic factors as either continuous or categorical variables. Because meteorologic factors are related to month of the year, we divided each year into three 4-month seasons, and used these divisions, rather than months, as a seasonal indicator. We included this seasonal indicator in our multiple linear regression analyses, using the SAS procedure REGRESS. Wind direction from the west was the main variable of interest. We also assessed interaction between this variable and other meteorologic factors. Additionally, we stratified the data into weeks with low and high wind speeds and temperatures. We then did t-tests, using emergency department visits as the dependent variable, between weeks with and without western winds (as a categorical, independent variable) present.

We used the generalized estimating equation analytic program from SPIDA to repeat regression analyses while controlling for autoregression in our model. We did this by grouping the data into four-month seasons and treating these groups as independent. We used independent and exchangeable correlation structures in this analysis, and controlled for wind speed and temperature.

Results Part I

During the study period, there were 12,539 visits (6,242 females and 6,297 males) for asthma or COPD to the four emergency departments. The diagnoses varied by age, with asthma more prevalent among younger people (younger than age 45 years) and COPD more prevalent among older people (older than age 45 years, data not shown). Similarly, the disposition of each patient visit also varied by age, with a higher percentage of older patients admitted to either the hospital or the intensive care unit than were younger patients (data not shown). Of the 12,539 patients who sought treatment for asthma or COPD, 10,078 (80.4%) were discharged to their home, 1961 (15.6%) were admitted to the hospital, 455 (3.6%) were admitted to the intensive care unit, 5 (0.1%) died, and 40 (0.3%) were transferred to another facility.

Table 1.—Number and Percentage of Patients who Sought Treatment for Asthma or Chronic Obstructive Pulmonary Disease in Four Hospital Emergency Departments by Age Group and Hospital, island of Hawaii, 1981 to 1991.

	Age Group (in years)							
Hospital	0 to < 5	5 to < 15	15 to < 25	25 to < 45	45 to < 65	65 to <75	> 75	Total
Kona	399 (14.1%)	552 (19.6%)	244 (8.6%)	552 (19.6%)	566 (20.1%)	309 (11.0%)	201 (7.1%)	2823
Kohala	100 (17.0%)	233 (39.7%)	50 (8.5%)	68 (11.6%)	44 (7.5%)	33 (5.6%)	59 (10.1%)	587
Hilo	1963 (22.4%)	1943 (22.2%)	885 (10.1%)	1616 (18.4%)	1249 (14.3%)	675 (7.7%)	435 (5.0%)	8766
Kau	41 (11.3%)	139 (38.3%)	52 (14.3%)	47 (13.0%)	24 (6.6%)	25 (6.9%)	35 (9.6%)	363
Total	2503	2867	1231	2283	1883	1042	730	12539

The percentages are a proportion of the row total and may not add up to 100% because of rounding.

Table 2.—Disposition of Patients Seeking Treatment for Asthma and Chronic Obstructive Pulmonary Disease at Four Hospital Emergency Departments, by Hospital, island of Hawaii, 1981 to 1991.

Hospital	Number and Percentage of Patients Discharged	Number and Percentage of Patients Admitted to Hospital	Number and Percentage of Patients Admitted to Intensive Care Unit	Number and Percentage of Patients Who Died	Number and Percentage of Patients Transferred to Other Facility	Total
Kona	1957 (69.3%)	696 (24.7%)	155 (5.5%)	5 (0.2%)	10 (0.4%)	2823
Kohala	506 (86.2%)	59 (10.1%)	0 (0.0%)	0 (0.0%)	22 (3.8%)	587
Hilo	7298 (83.3%)	1161 (13.2%)	300 (3.4%)	0 (0.0%)	7 (0.1%)	8766
Kau	317 (87.3%)	45 (12.4%)	0 (0.0%)	0 (0.0%)	1 (0.3%)	363
Total	10078	1961	455	5	40	12539

The percentages are a proportion of the row total and may not add up to 100% because of rounding.

Both the distribution of patient age and the disposition of the patient varied by hospital (Table 1, Table 2). Hilo Hospital had a higher percentage of visits by patients younger than age 15 years than did Kona Hospital (45% vs 34%, $p < 0.001$) and had a lower percentage of visits by patients older than age 45 than did Kona Hospital (27% vs 38%, $p < 0.001$) (Table 1). As one would expect, Kona Hospital had a higher proportion of patients whose diagnosis was COPD (data not shown) and admitted a higher proportion of patients than did Hilo Hospital ($p = 0.005$). We found that the two smaller hospitals in Kau and Kohala had distributions of patient ages that were similar to those found at Hilo Hospital. We also calculated what percentage of patients received care at the hospital close to them. Of the 8,353 patients included in this part of the study who lived close to Hilo Hospital (as determined by census district) 8,272 (99.0%) received their care at the Hilo Hospital emergency department, whereas of the 2,474 patients who lived close to the Kona Hospital, 2,385 (96.4%) received their care at the Kona Hospital emergency department.

Annual age-adjusted and population-adjusted rates of emergency department visits and hospitalizations for asthma did not show a consistent pattern over the study period (Fig 2). Hospitalization rates for asthma were similar among people living in the high-exposure and intermittent-exposure areas ($p > 0.05$ for every year), whereas emergency department visits for asthma were consistently higher among people living in the intermittent-exposure area than among those living in the high-exposure area ($p < 0.05$ for every year). Annual age-adjusted rates of emergency department visits and hospitalizations for COPD showed a different pattern (Fig 3). The high-exposure area consistently had the highest rates, and these rates were significantly higher in some years when volcanic activity was increased (1983 and 1988 to 1990, $p < 0.05$).

The overall age-adjusted and population-adjusted rate ratios for emergency department visits by people with asthma and COPD and hospitalizations for asthma and COPD, when we compared data for 1987 to 1991 with data for 1981 to 1986, were similar in all three regions of the island (Table 3). Both the emergency department visit rates and the hospitalization rates had increased in all three regions.

Results Part II

During the study period there were 7,993 emergency department visits for asthma to Hilo Hospital. Females made slightly more visits than males (4,032 vs 3,959). Children younger than age 16 made 3,895 (48.7%) visits. Most of the patients were discharged home (6,888, 86.2%).

Mean weekly visits increased from 11.4 in 1981 to 18.2 in 1991 (Table 4). After adjusting the population to the 1981 baseline population, we found that the mean weekly visits increased from 11.4 to 15.2. Figure 4 illustrates the weekly emergency department visits for asthma at Hilo Hospital, along with the volcanic activity over this period, 1981 to 1991.

Figure 5 shows the monthly patterns of emergency department visits for asthma, and how these patterns varied during different time periods. Multiple regression analysis showed the weekly means of emergency department visits during the months of June, July, and August to be significantly lower ($p < 0.01$) than those during the other months in 1983 to 1986 and 1987 to 1991, but not in 1981 to 1982.

For the 225 weeks for which we had data available, we found that weekly emergency department visits were positively correlated with the weekly percentage of hourly winds from the west (Pearson correlation coefficient (r) = 0.21, $p = 0.002$), positively correlated with the weekly percentage of hourly low wind speeds ($r = 0.145$, $p = 0.038$), positively correlated with the weekly percentage of low temperatures ($r = 0.20$, $p = 0.003$), and negatively correlated with the weekly percentage of hourly winds from the east ($r = -0.22$, $p = 0.002$). Figure 6 displays weekly emergency department visits and weekly percentages of hourly winds from the west. Meteorologic factors varied by month (Fig 7).

Emergency department visits were increased during those weeks that had winds from the west more than 10.8% of the time, and during those weeks that had low temperatures more than 17.8% of the time (Table 5). We did not detect a relationship between weeks

Fig 2.—Annual age-adjusted rates for emergency department visits and hospitalizations for asthma during 19811991, island of Hawaii. We used adjusted rate ratios to determine the significance between the high-and intermittnet-exposure areas for each year.

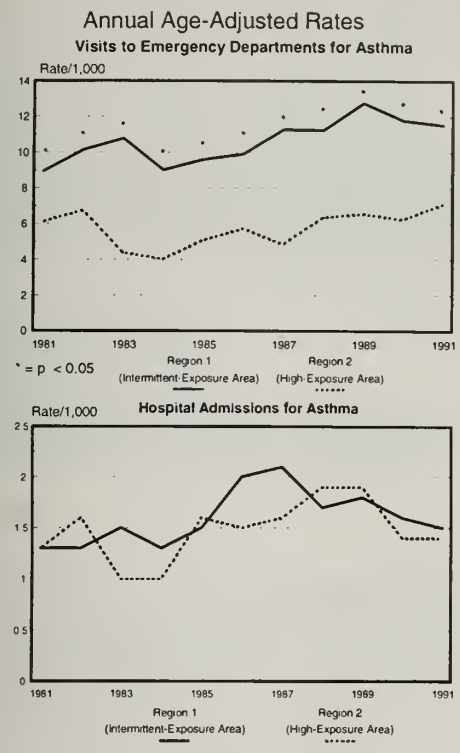


Fig 3.—Annual age-adjusted rates for emergency department visits and hospitalizations for chronic obstructive pulmonary disease (COPD) during 1981 to 1991 on the island of Hawaii. Age-adjusted rate ratios were used to determine the significance between the high-and intermittent-exposure areas for each year.

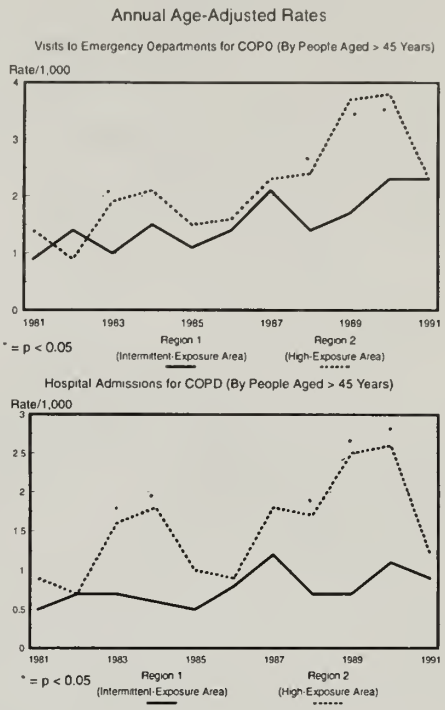


Table 3.—Age-Adjusted Rate Ratios, by Region, for Visits to Hospital Emergency Departments and Hospitalizations for Asthma and Chronic Obstructive Pulmonary Disease (COPD), island of Hawaii, 1981 to 1991.

	Region 1 (High-Exposure Area) RR (95% CI)*	Region 2 (Intermittent-Exposure Area) RR (95% CI)*	Region 3 (Low-Exposure Area) RR (95% CI)*
Emergency Department Visits for Asthma	1.17 (1.07, 1.27)	1.21 (1.15, 1.26)	1.26 (1.03, 1.53)
Hospitalization for Asthma	1.24 (1.03, 1.48)	1.17 (1.04, 1.32)	1.70 (0.96, 3.01)
Emergency Department Visits fro COPD	1.87 (1.52, 2.29)	1.66 (1.43, 1.92)	2.35 (1.18, 4.68)
Hospitalizations for COPD	1.76 (1.38, 2.24)	1.54 (1.25, 1.90)	2.39 (1.03, 5.53)

* Rate Ratio (RR) and 95% Confidence Intervals (CI), comparing age-adjusted rates in 1987 to 1991 to 1981 to 1986.

with low wind speeds and emergency department visits. The percentage of hourly winds from the west was higher during weeks with low temperatures and low wind speeds than it was during weeks with high temperatures and high wind speeds (Table 5). When we stratified the data into weeks with low wind speed and weeks with high wind speed, we found that western winds were associated with an increase in emergency department visits in both strata (Table 6). When we stratified the data into weeks with high temperatures and weeks with low temperatures, we found that western winds were associated with an increase in emergency department visits in weeks with high temperatures, but not during weeks with low temperatures.

We tested for, and did not detect, interactions between wind direction and wind speed or temperature in our multiple regression model. In the final model (Table 7), western winds accounted for a 16% increase in emergency department visits for asthma at Hilo Hospital, after we adjusted for other low wind speed, low temperature, year and season.

In the linear generalized estimating equations, where we grouped the data by year and season to control for autocorrelation, wind direction from the west accounted for a 15% increase in emergency department visits after controlling for wind speed and temperature ($p = 0.005$).

Discussion

The first part of this study examined the trends in emergency department visits for asthma and COPD on the island of Hawaii from 1981 to 1991. We were interested in determining whether there was any change in this trend after Kilauea Volcano began erupting intermittently in 1983 and continuously in 1986.

We did not have air quality data available to validate our high-exposure, intermittent-exposure, and low-exposure regions; instead, we used the consensus of two physicians who treat patients living on the island to determine these regions. Although these divisions seem reasonable, they may not accurately reflect actual exposures to volcano-generated air pollution.

We evaluated an 11-year period in which people had visited emergency departments for the treatment of asthma or COPD. We were able to demonstrate a difference in emergency department utilization between the two largest hospitals: Kona and Hilo. Hilo Hospital tended to treat a greater number of younger patients (younger than age 15 years) and to admit fewer of them, whereas Kona Hospital tended to treat a greater number of older patients

Fig 5.—Monthly emergency department visits for asthma to Hilo Hospital, Hawaii, adjusted to 1981 population for the region that Hilo Hospital services.

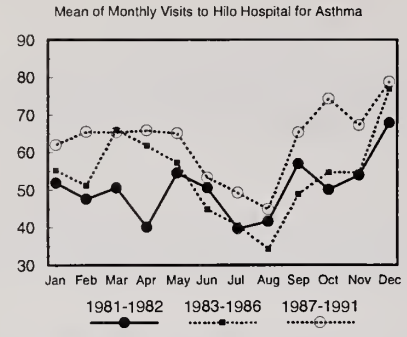
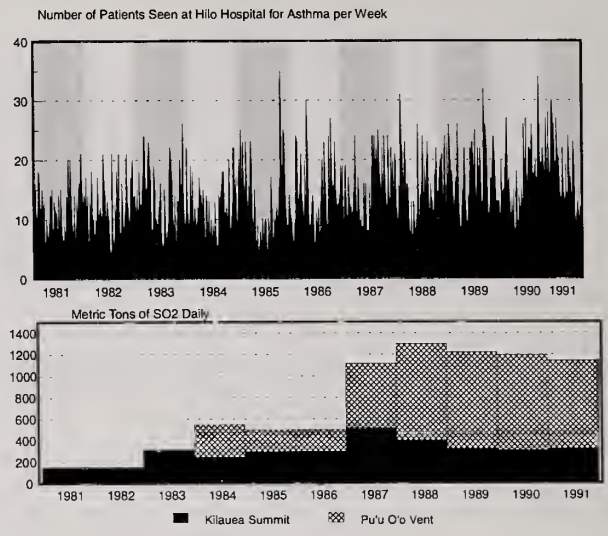


Fig 4.—Weekly emergency department visits for asthma to Hilo Hospital, Hilo, Hawaii, and volcanic activity, as determined by sulfur dioxide emissions, for the years 1981 to 1991.



(older than age 45 years) and to admit more of them. The reasons for the difference in utilization patterns are unclear but may be related to the differences in the communities that surround these two hospitals. This difference may have affected the outcome of the study, especially if children in the Kona area, which is thought to have high exposure to volcanic air pollution, were more likely to receive care for their asthma exacerbations at physician's offices than at the hospital's emergency department. We were not able to obtain data from the Honokaa Hospital, where emergency department logs were not maintained during 1981 to 1991. This small hospital is located in a low-exposure region from which it draws its patients. The absence of data from this hospital would cause the estimates of asthma and COPD rates among people living in the low-exposure region to be falsely low, but this absence would not be expected to affect these rates among people living in the high-exposure or intermittent-exposure regions of the island.

Annual age-adjusted rates for both emergency department visits and hospital admissions for asthma varied by the region of the island. Although people living in the intermittent-exposure area had a higher rate of emergency department visits than did people living in the high-exposure area, the hospitalization rates for people living in either area were similar in all years of the study. This finding suggests that the people with asthma who were treated at the hospital in the intermittent-exposure region (Hilo) had less severe illness than those who sought treatment at the hospital in the high-exposure area (Kona). Other possibilities include a diagnostic bias at Hilo Hospital (physicians may have been more likely to list a discharge diagnosis as asthma), a difference in emergency department utilization between Hilo and Kona Hospitals, or a difference in access to primary care physicians between the Hilo and Kona communities. Conversely, in 1983 and 1988 to 1990, age-adjusted rates for both emergency department visits and hospitalizations for COPD were higher in the high-exposure region than they were in the intermittent-exposure region.

Age-adjusted and population-adjusted rates of emergency department visits for both asthma and COPD were higher in 1987 to 1991 than in 1981 to 1986; the same was true for hospitalizations for asthma and COPD. This relationship was detectable in areas of the island thought to have high, intermittent, and low exposures to volcanic air pollution. The reasons for these higher rates are unclear. One possibility is that the increase we observed was unrelated to the volcanic eruption. Another possibility is that, because people travel to all areas of the island, their residence may not accurately reflect their exposure to volcanic air pollution. Yet another possibility is that volcanic air pollution affects the entire island to some degree.

National estimates of hospital discharge rates for asthma increased 4% from 1980 to 1990.[7] In this study, we found that hospitalization rates for asthma, after adjusting for age and population, increased 20% and varied by region. The increasing morbidity and mortality of asthma nationally is thought to be related to several factors, including allergen exposure, lack of access to care, inappropriate medication use, and poor air quality. We do not have any data on allergens that are present on the island or how their levels may have changed over the study period. More than 98% of Hawaii residents have medical insurance,[8] so most would have access to either a primary care provider or to the emergency department. We do not have data on medication use by residents, but would not expect this to vary dramatically from such use by people in the rest of the country. We did not collect data on emergency department visits for bronchitis or pneumonia for this 11-year period. These conditions would be expected to affect a larger portion of the population than asthma or COPD and might be more sensitive indicators of the effects of volcanic air pollution.

The results of the second part of the study suggest that, after controlling for other meteorologic factors such as wind speed and temperature, winds from the west are associated with an increase in emergency department visits for asthma at Hilo Hospital. There is a strong, independent, seasonal component to both emergency department visits for asthma and the other meteorologic factors that were measured. Unfortunately, we do not have meteorologic data prior to 1986 to determine whether this pattern was similar when there was less volcanic activity.

Other researchers have demonstrated a relationship between meteorologic factors and hospitalizations for asthma exacerbations.[9,10] Results of a study on Oahu demonstrated a relationship similar to that seen in our study between unusual wind directions and emergency department visits for children with wheezing.[11] In that study, the magnitude of the effect of wind direction was about 20% of the effect of temperature, whereas in our study, the magnitude of the effect of wind direction was greater than that of temperature.

Air quality factors, including levels of sulfur dioxide,[10,12] ozone,[13] acid aerosols,[14] and organic dusts[15] have been linked to respiratory morbidity and mortality in some studies. Sulfur dioxide is the main

Table 4.—Population estimates of the Hilo Hospital catchment area and mean weekly emergency department visits for asthma, unadjusted and adjusted to 1981 population, for 1981 to 1991.

Year	Estimated Population	Inadjusted Weekly Mean Visits	Adjusted Weekly Mean Visits
1981	56,833	11.4	11.4
1982	57,958	12.1	11.9
1983	59,083	13.9	13.4
1984	60,208	12.1	11.4
1985	61,333	13.3	12.4
1986	62,458	13.7	12.5
1987	63,583	15.0	13.4
1988	64,708	15.6	13.7
1989	65,833	17.7	15.3
1990	68,083	16.8	14.2
1991	69,958	18.2	15.2

Table 5.—Mean emergency department (ED) visits to Hilo Hospital, Hawaii, for asthma and mean percentage of weekly winds from the west stratified by weeks with or without low wind speeds, low temperatures, and winds from the west. The P values compare the yes values to the no values in each category.

Variable		N	ED Visits	P	Percentage of Winds from West	P
Low Wind Speed	No	113	15.6	.210	0.9	< .000
	Yes	112	16.5		17.3	
Low Temperature	No	111	14.7	< .000	5.9	.003
	Yes	112	17.4		12.3	
Winds from West	No	168	15.4	.003	1.3	< .000
	Yes	57	17.9		31.8	

pollutant generated at Kilauea Volcano (Terry Gerlach, U.S. Geologic Survey, August 1993), in amounts that far exceed those generated by coal-burning power plants.[16] Additionally, hydrochloric acid aerosols are generated when hot lava enters the ocean.[17] We did not have population-based air quality data available to us. The meteorologic station, located near the Kilauea Volcano's summit, documented high levels of sulfur dioxide when the wind was blowing toward the monitor (data not shown). Although tourists visit this area, few people live near this monitoring station, and the air pollutant levels measured there would likely not be correlated with population exposures in Hilo. Additionally, the largest source of sulfur dioxide is the Puu Oo vent (Fig 5), located eight miles closer to Hilo than the summit.

We used the meteorologic data from the summit of Kilauea Volcano, believing that these data would best reflect the general meteorologic conditions on the eastern side of the island, without being affected by the daily wind variations that affect the more coastal monitors. The overwhelming majority of the winds measured at this weather station were the typical eastern trade winds. The weekly percentage of western winds varied by month, with June, July, and August having the lowest percentage, and October, December, and February having the highest percentage. Even in the months with the highest percentages, however, western winds accounted for only 25% of the total weekly winds.

We used different methods to determine the relationship between wind direction and emergency department visits. All methods demonstrated an increase in weekly visits of approximately 15% associated with western winds when we controlled for other factors. This finding may be related to air quality factors and volcano-generated air pollution. Another cause for this finding might be allergens or molds blown into the area from the east central part of the island. Other factors, such as respiratory infections or influenza epidemics, also may be important.

Limitations of both parts of this study include a possible self-selection process, diagnostic bias, and lack of environmental or personal exposure data. Some physicians have reported that some of their patients who thought that the volcanic air pollution was adversely affecting their health either moved to a different part of the island or moved off the island altogether. If this observation is true, those residents who remained behind in the high-exposure areas would be a healthier subgroup, people who were possibly less affected by the effects of volcanic air pollution. Our extraction method was dependent on the diagnosis listed in the emergency department log book. Different physicians might give a similar disease process different diagnoses, which might have affected our results if these alternative diagnoses were not included in data extraction. A final limitation is that we did not have regional or personal exposure data. This limitation makes this study an ecologic one, which can be used to generate but not prove hypotheses.

Some of the results of our study support the hypothesis that volcanic air pollution affects respiratory health on the island of Hawaii, while other results do not. We found that emergency department visit rates and hospitalization rates for both asthma and COPD increased in all regions of the island of Hawaii during the period 1987 to 1991, including those areas that presumably have less exposure to volcanic air pollution. Conversely, we detected a higher rate of both emergency department visits and hospitalizations for COPD on the high-exposure, western side of the island during 1983 and 1988 to 1990 than on the intermediate-exposure, eastern side of the island during those years. We did not see, however, a similar effect in asthma hospitalizations, and we found that the rates of emergency department visits for asthma were much higher on the intermittent exposure side of the island. On the other hand, during weeks when winds were blowing towards the Hilo side of the island, 15% more people went to the emergency room in Hilo because of asthma. We do not have air quality data and cannot determine whether these findings are related to volcano-generated air pollutants or other factors. Further investigations of asthma and other respiratory disease on this island should include population-based air-quality monitoring, that measures levels of sulfur dioxide, fine respirable particulates, and acid aerosols.

Use of trade names is for identification only and does not constitute endorsement by the U.S. Public Health Service or the U.S. Department of Health and Human Services.

Acknowledgments

The authors would like to thank Jack Lewin MD, Bruce Anderson PhD, Richard Vogt MD, and Robert Worth MD, of the Hawaii Department of Health, Honolulu; Terry Gerlach, of the U.S. Geologic Survey, Vancouver, Washington; Amy Hamane of the American Lung Association of Hawaii, Hilo; and Mary Boyd, Ruth Etzel MD, Henry Falk MD, and Dana Flanders MD, of the Centers for Disease Control and Prevention, Atlanta, Georgia, for their assistance with this research. This study was supported in part by the Shippers' Wharf Grant, established in 1904, and by the American Lung Association of Hawaii.

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Fig 7.—Weekly percentage of low temperature hours, low wind speed hours, and hours with winds from the west, by month over the time period 1987 through 1991, Hilo, Hawaii.

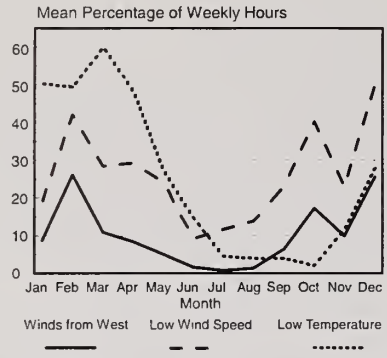


Fig 6.—Weekly emergency department visits for asthma to Hilo Hospital, Hilo, Hawaii, and weekly percentage of hours with winds from the west, measured at the Kilauea summit, for the years 1987 through 1991.

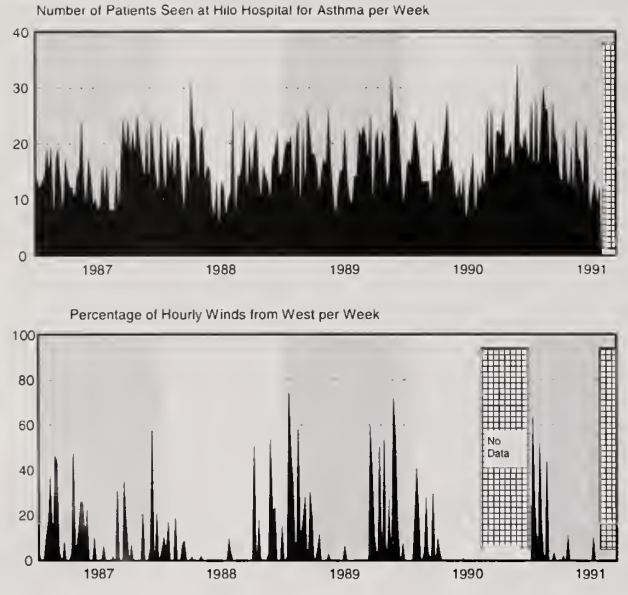


Table 6.—Mean number of emergency department (ED) visits to Hilo Hospital, Hilo, Hawaii, for asthma by weeks, with western winds, stratified by weeks of high and low wind speeds and weeks of high and low temperatures.

	Variable		N	ED Visits	P
Weeks of Low Wind Speed	Winds from West	No	57	15.4	.020
		Yes	55	17.8	
Weeks of High Wind Speed	Winds from West	No	111	15.5	< .000
		Yes	2	23.0	
Weeks of Low Temperature	Winds from West	No	71	17.1	.490
		Yes	41	17.9	
Weeks of High Temperature	Winds from West	No	95	14.1	.009
		Yes	16	18.1	

Table 7.—Multiple linear regression results of variables in the final regression model for mean emergency department visits to Hilo Hospital for asthma, 1986 to 1991.

Variable	Coefficient	t	p
Weeks with Western Wind	2.50	2.41	.017
Weeks with Low Wind Speed (Quartiles)	-0.93	2.06	.041
Weeks with Low Temperature (Quartiles)	1.01	2.35	.019
Year*			
1988	1.30	1.37	.172
1989	3.84	3.75	< .000
1990	2.96	2.45	.015
1991	4.17	3.44	.001
Season**			
Spring (January - April)	1.69	1.58	.115
Fall (September - December)	4.79	5.17	< .000

R^2=0.22; F=6.63

* 1986 to 87 were the control years

** Summer (May to August) was the control season

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News and Notes

Henry N. Yokoyama MD

Conference Notes

Management of Thyroid Disorders

Lecture by Laurie Tom MD, an endocrinologist at QMC-UH, July 29, 1995

The thyroid gland produces T3 and T4 which affect multiple organ systems including the reproductive system.

Hypothyroidism (most common)

- 4 to 8 times more common in women than men
- More likely with autoimmune family hx
- Occurs in 10% to 21% of women over age 50; and symptoms often attributed to menopause.
- High T4, T3 cause hyperthyroidism
- Low T4, T3 cause hypothyroidism

Hypothyroidism

- Masks coronary artery disease (CAD)
- A/C lipid abnormalities
- With CAD can be exacerbated by hypertension, anemia, etc.
- Affects reproductive system

Etiology

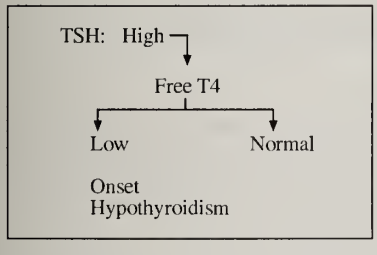
Hashimoto's dis; autoimmune family hx; head and neck radiation and surgery; thyroid belt (iodine deficient areas around Great Lakes); drugs.

Thyroid Function Studies

TSH: $60 reduced to $34; free T4: $34

TSH Values:	Low	Normal	High
	<0.5	.5 - 5.0	>5.0

TSH changes before T3 and T4 in early subclinical hypothyroidism and hyperthyroidism.



Subclinical hypothyroidism progresses to clinical dis. Initially 13.2% had normal T4, high TSH. Four years later, 33% had low T4 and high TSH. Once patient diagnosed, treatment begins. High titer of anti-TPO microsomal antibodies are predictive of those that progress to overt hypothyroidism—estimated at a rate of 5% to 8% per year.

Hypothyroidism may mask CAD symptoms by:

- Bradycardia, depressed contractility leading to reduced O_2 demand
- Physical inactivity so angina less likely
- Altered mental status so symptoms not reported

CAD symptoms can be exacerbated in hypothyroidism by:

- Hypertension leading to increased O_2 demand
- CHF with depressed ventricular function
- Anemia so less O_2 available to myocardial tissue

Lipoprotein changes in hypothyroidism:

- Increased total cholesterol, LDL, HDL, and VLDL, but the degree of increased HDL less than LDL, so still an *unfavorable* ratio.

Effects on reproductive system

- Anovulation
- Increased frequency of periods
- Heavier menses
- Fertility difficult
- Increased rate of miscarriages

Appropriate population for thyroid screening:
Patients with family history of autoimmune thyroid disease; Hashimoto's or Graves' non-thyroid autoimmune diseases; diabetes mellitus type 1; pernicious anemia; SLE; myasthenia gravis.

Therapy of choice in hypothyroidism

Proper dose of LT4 (levothyroxine sodium)

- Desiccated thyroid contains T3 which has adverse stimulatory effects on heart

Determinants for LT4 dose: Age, weight
Dose first thing in am: 1.6 µ/kg/d
(Improved absorption on empty stomach)
Stable elderly. Start 25 µg to 50 µg; titrate upward with 12.5 µ; monitor TSH

- Follow up with annual TSH

With age, lower LT4 dose may be required.

- Overdose in premenopausal woman

12.8% have low bone density. Over-suppression (low TSH) may cause *subclinical* hyperthyroidism and may have adverse effects on heart and bone density by aggravating osteopenia. New sensitive TSH assays are good for distinguishing low normal from suppressed values.

Hyperthyroidism

Incidence: Women more than men

- Graves' disease: most common; auto immune disease
- TMG (Toxic multinodular goiter): Dx: TSH and T4 (TSH producing tumors)

Preferred treatment

- Graves' disease: I^{131}
 Anti thyroid Rx
 Surgery
- TMG: Surgery
 I^{131}
- Painful thyroiditis Symptomatic (anti-inflammatory drugs)
- Non-painful thyroiditis: Symptomatic (watch for eventual hypothyroidism)
- Hashimoto's thyroiditis: Symptomatic (watch for eventual hypothyroidism)

re Anti-thyroid drugs: Graves' disease pretreated with ATD leads to reduced efficiency of I^{131} therapy

Thyroid Nodules

Five percent incidence of cancer. Nodules are common (10% to 15% in adults undergoing PE). Up to 15% of nodules have suspicious features clinically.
Dx: thyroid scanning: "cold" and "hot" nodules, biopsy "cold" nodules.
Ddx: thyroid nodules: Adenoma, carcinoma, cyst, other
Malignancies usually "cold," *but* most nodules are cold.

➤ *Continued on next page*



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Initial evaluation: TSH

If TSH low, then scan; hot nodule almost never malignant

Normal TSH, then FNA (need cytology)

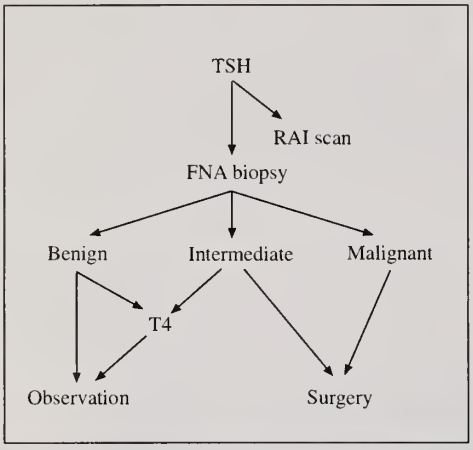
Ultrasound and RAI scan add to costs and not helpful in ruling out malignancy

Nondiagnositic biopsies (no cells to examine) are not "negative"

Indeterminate biopsies, if suspicious clinically may require surgery.

FNA (fine-needle aspiration) is simple, cost-effective and accurate in the hands of a good endocrinologist along with a good cytopathologist.

Clinical approach:



Classified Notices

To place a classified notice:

HMA members.—Please send a signed and typewritten ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in *HMJ* as space is available.

Nonmembers.—Please call 536-7702 for a nonmember form. Rates are $1.50 a word with a minimum of 20 words or $30. Not commissionable. Payment must accompany written order.

Locum Tenens

Radiologist.—Available on short notice for locum tenens. Full or part time, any island. (808) 875-9794.

Locum tenens available.—Board-certified family practice, 12 years' clinical experience in Hawaii. Deborah C. Love MD; Home phone on Oahu: (808) 637-8611; cellular phone Maui: (808) 281-4713.

Office Space

Pearl City Business Plaza.—Long leases; 680+ sq ft; 24 hr security; free tenant/customer pkg; available now; call 531-3526 Gifford.

Medical Arts Bldg.—250 sq ft to 997 sq ft office space avail. Pharmacy, x-ray lab; Clinical Laboratories of Hawaii on-site. Call Chrissy Young (S), 524-2666.

Space to Share.—Physician practice has space to share with flexible arrangements for individual practice needs. Near QMC ground floor, free parking. Call Deborah at 532-0517 for more information.

For Rent.—100 sq ft office space Kapiolani Medical Center , phone 949-3677

Looking for an MD.—Opportunity to share office space with alternative health care providers. Low overhead. Space available in town. Tuesday, Thursday, Saturday, Sunday. Four treatment rooms, reception area. Call Dr. Bryan Luke or Susan at 591-2400.



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Council Highlights

February 2, 1996
Roger T. Kimura MD, Secretary

The HMA Council was called to order by HMA President Carl Lehman MD at 5:32 p.m.

Present: Officers: Drs. J. Spangler, President-elect; L. Howard, Treasurer; F. Holschuh; Immediate Past President; AMA Delegates: C. Kam, R. Stodd; County Presidents: P. Blanchette, Honolulu; T. Crane, Kauai; T. Smith, West Hawaii; Councilors: T. Au, D. Canete, P. DeMare, M. Shirasu, K. Thorburn, W. Young, J. Betwee, P. Kim, C. Kadooka; Past Presidents: W. Chang, W. Dang, A. Don, G. Goto, J. Lumeng, J. McDonnell; Young Physician Delegate: C. Goto; HMA Alliance: C. Gutteling, S. Spangler.

HMA Staff: J. Asato, J. Estioko, P. Kawamoto, B. Kendro, J. Won, A. Rogness, recording secretary.

Minutes: The minutes of the January 5 meeting were approved as circulated.

• Dr Lehman reported the Finance and Pension Committees will be meeting together this year, and it might become a combined committee; a bylaws change would be necessary. He attended a Governor's luncheon with two Mayo Clinic physicians. The Hawaii Health Council met on January 22 and each Council member is working on which issues they consider to be most important. He will be attending a Hawaii Bar Association meeting on dispute resolutions. He received a thank-you letter from Thomas Reppun MD, who requested a copy of the memorial resolution presented at the HMA House of Delegates for his father, Fred Reppun MD.

• The HMA Alliance reported: They have been working on the issue of domestic violence and a banner is almost completed. Doctors' Day is on March 30, a proclamation will be signed by the Governor and the annual gift of first-aid kits will be delivered to the legislators. The Alliance will work together with HMA staff on the Distinguished Medical Reporting Awards banquet on Saturday, April 13 to create a gala, black-tie optional event.

For Action

• Council approved the following actions: the HMA Alliance's request to be registered as a non-profit organization with the Department of Commerce and Consumers Affairs, which enables them to utilize bulk mail rate postage.

• Appointed Drs David Fitz-Patrick and Eugene Magnier to the HMA Employees' Pension Committee and elected the HMA Finance Committee and their terms of office as follows: Drs A Kunimoto (4), M. Shirasu (3), S. Hundahl (2), P. Blanchette (1).

• Deferred action regarding any decision on the IPA venture between HMA and PMAG until March I after information is received from meetings.

Supported a physician-driven management service organization (MSO).

Recommended that the Legislative Committee discuss a Patient Protection Act for the1997 legislative session with appropriate consultants.

• Approved the list of HAMPAC Board members, to include HMAA members Scott Carrothers, Shirley Robinson, and Cherlita Gutteling.

• Appointed Dr Lehman's nomination of Dr Reginald Ho to serve on the HMA Cancer Commission as HMA's representative for a 3-year term.

• Approved a plan whereby the Honolulu County Medical Society would contribute $7,000 and HMA would assume the balance of the cost to combine the *HCMS Bulletin* and *HMA Newletter* into one newsletter.

Component Society Reports

Kauai.—Dr T. Crane, President, reported a medical society meeting will be held on February 9 and Drs C. Lehman and T. Au have been invited to attend. The meeting will be a combined Valentine's Day celebration and Legislative Update and Information Seminar.

Honolulu.—Dr P. Blanchette, President, reported that the HCMS is looking at streamlining the organization and eliminating potential redundancies. The Board members have begun to look at the AMA Federation recommendations on restructuring. The HCMS is alrcady proposing focus groups of physicians who are in growing areas such as Mililani, Ewa Beach, Wahiawa and the Windward areas. Dr Scott Hundahl resigned as HCMS Councilor and Dr Blanchette has appointed Chiyome Fukino MD as his replacement.

East Hawaii.—Dr L. Sonoda-Fogel reported for President E. Bade that their county will be planning a meeting in March. The summer program that the county used to have will now be coordinated by the East Hawaii IPA.

West Hawaii.—Dr T. Smith, President, reported that the North Hawaii Community Hospital will be open in about a month and a half. Their society will set up a meeting with Dr Lehman, Mr Won, and others to discuss the IPA and restructuring. Their society will be holding meetings on legislative issues to address the many bills.

For Information

Definition of Emergency Services.—At the last Council meeting an issue was discussed regarding retroactive denials for non-emergent care other than an evaluation fee and directed the ER to refer patients to the patient's primary care physician. The implementation of such a plan has been deferred. An ad hoc committee of ER physicians has been appointed by the insurer to examine the dangers of triaging people out of the ER to a lower level of care without adequate work-up. Dr Holschuh will keep Council informed.

Medicaid Cutbacks Group.—Dr Holschuh reported he has been meeting with a group to look at cutbacks in Medicaid and block grants. They are also discussing the concept of eliminating individual physician disability determinations for the general assistance category and instead using a state panel of physicians to do the determinations.

SHPDA.—Dr Holschuh served on the task force established by the Legislature to evaluate the functions of the State Health Planning and Development Agency. A copy of his report was distributed at the Council meeting. Dr Holshuh supported and presented the AMA's position to the Task Force of voluntary community health planning with no mandate. Twenty of the 23 member task force wanted to keep SHPDA in its current form or with some streamlining, and it will sunset in 5 years.

DEA.—At the last Council meeting there was discussion on the inappropriate use of DEA numbers. Dr Holschuh wrote a letter to the AMA regarding the concern and Mike Vitek, Medical Director of OMSS of the AMA responded. The concern went through the AMA channels and the AMA has asked for another hearing with the DEA to discuss the issue.

MADD.—Dr Holschuh is serving on the MADD Committee which met at the HMA. The committee wants to work on the definition of probable cause.

Restructure Activities.—The AMA's Report of the Study of the Federation was sent to all the county society presidents. Some of the ideas may be used on the local level. Comments on the report will be sent to the Long-Range Planning Committee.

Distinguished Medical Reporting Awards Banquet.—The banquet is planned for Saturday, April 13 at The Ilikai Hotel. The HMA and HMA Alliance will work together on the gala event.

Medical Claims Conciliation Panel.—Dr Lehman reported there was concern about the panel not being active. Rodney Maile, Senior Hearings Officer sent HMA a letter confirming that the panel is functioning as usual. They are seeking physician volunteers to serve on the panel. This request will be placed in the next newsletter.

The meeting was adjourned at 7:50 pm.

The Weathervane

Russell T. Stodd MD

Comment on Murphy's Law—Murphy was an optimist.

An experienced CRNA (certified registered nurse anesthetist) performed peribulbar anesthesia for a radial keratotomy operation. She perforated the globe resulting in vitreous hemorrhage, retinal detachment, and additional surgery. Experts for the plaintiff contended the event was *negligence per se* and that no CRNA was qualified to perform a peribulbar block. However, the CRNA had performed the block on hundreds of patients over a ten-year period, and presented a video demonstrating her technique. Experts who viewed the tape found nothing wrong, and stated it did not violate the standard of care. The jury recognized the perforation as an unfortunate event and found in favor of the defendant.

Television—a medium. So-called because it is neither rare nor well done.

You have never heard of the *nocebo*? It is the opposite of the placebo, a pill that makes you feel better, although it contains only sugar. The nocebo makes you feel bad when physiologically it shouldn't be able to do so. Example—for two years after the Gulf War no complaints were received from war vets, but after a doctor suggested a *syndrome* and the media and attorneys got into the picture, now thousands have developed classic psychosomatic complaints such as aching joints and headaches. The unusual ailment involved only American soldiers, until the British press picked up on it, and then British soldiers became ill. Similarly, for 30 years women were satisfied with breast implants, but when the media and the attorneys got into the act, stories such as *toxic breasts* and *ticking time bombs*, produced all kinds of strange illnesses. Curiously, silicone makes only American women sick; foreign women apparently are immune. One wonders when some attorney will discover that *deadly* silicone is actually being placed in human eyes.

Confidence is simply that quiet, assured feeling you have before you fall flat on your face.

Gordon Miller MD, an ophthalmologist in Salem, Oregon, has prepared a "Capitation Initiative" aimed at the November ballot. His contention is that capitation contracts cause physicians to withhold care because of financial self-interest. His bill would provide that doctors could be paid in only five ways: for work performed (fee for service), by an hourly wage, by prearranged salary and benefits, by bonuses based on work performed, and by reimbursement for expenses. Dr Miller claims that the petition will exclude physicians who are paid for not doing work. As you might guess, the state's HMOs are seriously opposed and claim that the initiative would hamper their successful attempts to hold down health care costs. Yes, and it would surely impact the fantastic incomes of some managers and investors.

There is no cure for birth or death save to enjoy the interval.

For a few dreamers who fail to understand why the Medicare program is in financial trouble, please consider the following: at the beginning of the 20th century, life expectancy in the United States was believed to be about 49 years. Today that number has increased to an estimated 75.7 years. Beyond question, it will expand further as research produces treatment for chronic illnesses, such as diabetes, heart disease, and cancer. Then consider the advances in control of infections such as polio, smallpox, measles, influenza, among others. Not only are people living longer, resulting in more degenerative conditions, requiring more surgery, more medications, and more extended institutional care, but the arrival of the baby boom generation will greatly enlarge the population of eligible citizens. Obviously, expenditures for the growing Medicare population are greatly challenged now and soon will exceed all available income. Superficial, Band-aid mechanisms, such as squeezing reimbursement to doctors and hospitals, make no significant impact. Congress must establish fundamental changes in such factors as eligible age, financial need, and health behavior patterns. The currently silly and arrogant posturing by Congress and the President over cosmetic changes in the Medicare budget appear inane after examining the overall social challenge.

Make a point of trying everything once—except incest and folk dancing.

It seems incredible on the surface, but the Red Cross may lose blood donors in the southern region because of a cookie shortage. It isn't just any cookie, but the *Nutter Butter*, a 65-calorie peanut-shaped and peanut-butter-flavored morsel. Since 1970, the cookie has been part of the post-donation treats, but the regional Red Cross in its wisdom (?) reallocated funds, and discontinued the cookie. Calls and letters of complaint have been pouring in, some including threats of no more blood donations. It appears that some believe the cookie has medicinal qualities, others just like the taste, and a few say it is the only time they get to enjoy that treat.

There's no safety in numbers—or in anything else.

The recent AAO meeting in Atlanta, Georgia, yielded a very interesting picture of expenditures for eye care by the Department of Veterans Affairs. A survey conducted by the Subcommittee on Eye Care determined that optometry clinics require 44% more full-time-equivalent employees (FTEE) than ophthalmology clinics to handle the same number of visits. On a per-visit basis, optometry services cost as much as or slightly more than ophthalmology services. Ophthalmology-led services give the most productivity per FTEE, the lowest cost per visit, and shorter waits for a new appointment. The summarizing statement: "A strong argument for the ophthalmologist-led team of eye care providers can be made based on efficiency and quality at the lowest cost."

Addenda

- Latest study—mydriatics cannot diagnose Alzheimer's disease!
- Meetings are indispensable when you don't want to do anything.
- Lorena Bobbitt was acquitted because the evidence would not stand up in court.

Aloha and keep the faith—rts ■

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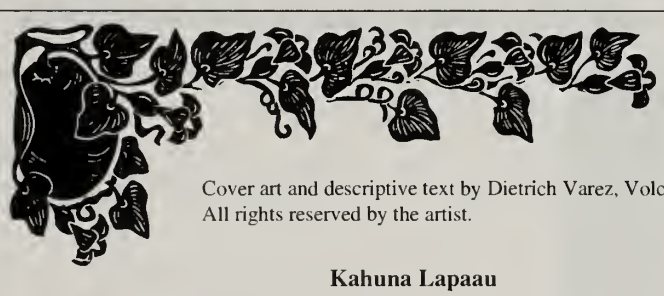
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Kahuna Lapaau

Depicted here is a medicinal *kahuna* or doctor. Also shown are a few of the plants he might have used: *awa, ki,* and sugarcane or *ko.*

National HIV Telephone Consultation Service

The National HIV Telephone Consultation Service, "Warmline" (800-933-3413) based at San Francisco General Hospital provides free HIV clinical information and case consultation to health care providers. The Warmline faculty includes physicians, clinical pharmacists, and nurse practitioners who have extensive experience treating patients with HIV disease. Warmline consultants are available to answer questions between 7:30 am and 5:00 pm PST. A 24-hour voice mail system is available at other times.

The Warmline is funded by the Health Resources and Services Administration, the AIDS Education and Training Centers, and the American Academy of Family Physicians.

Editorial

Norman Goldstein MD

Very special issues coming up

Our September issue of the *Journal* will be compiled by guest editor Florence Chinn MD. Florence retired from her internal medicine practice and as a medical consultant for the Hawaii Health Care Administration Division—but she is busier than ever! She serves on the Hawaii State Violence Prevention Coordinating Council and is co-chair of the Hawaii Medical Association Domestic Violence Prevention Committee. Look for the special issue on *Domestic Violence.*

Death with Dignity will be our special issue in November, edited by past president of the Hawaii Medical Association, Fred C. Holschuh MD. This issue promises to be one of our most stimulating, thought-provoking issues ever. We already have manuscripts from local and national authorities in the field.

We welcome *Letters to the Editor* on these subjects as well as others, even before the publication of the issues.

Specifically, if you presently care for terminally ill patients or plan to do so. We would like to hear from you. Write or fax me.

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HMA President's Message

Carl W. Lehman MD

Why should medical doctors or osteopathic physicians belong to the Hawaii Medical Association?

Each year, physicians must reaffirm their commitment to organized medicine: joining the HMA lets us speak with one voice that represents a force in our community striving not only to uphold and protect our profession but also to set the standards, to be the advocate, to carry forth the visions our training and experience have provided. Paying dues to a professional organization must be judged by standards different from those when buying material items. Rather than analyzing how much a member saves or benefits from the amount of dues paid each year, one must look at what made it possible for us to attain our medical education and practice our profession as well as the contributions made to society.

Some of us have little knowledge about the achievements and accomplishments made on behalf of our profession by the medical association. I want to thank Becky Kendro for helping me collate this list of HMA accomplishments.

• This year marks the 20-year anniversary of bold and innovative legislation passed to address tort reform issues. As a key player on a community-wide Malpractice Commission, HMA physicians led the way in seeking legislation to set standards of informed consent, added an *ad damnum* clause to the law, established the Medical Claim Conciliation Panels to review all medical torts prior to entry into the courts, amended the Medical Practice Act to define more clearly grounds for licensure actions, and required reporting of adverse peer review actions to the Board of Medical Examiners. An umbrella insurance fund was created in an effort to reduce professional liability insurance premiums although this was later repealed.

This legislation has been of considerable importance to physicians as well as to those filing tort cases. The MCCP panels have been very successful in settling or dismissing malpractice cases prior to entry into a costly court system. Throughout the years, nearly 75% of all cases have been resolved at the panel level. The fact that the panels have been able to continue operations for the past 20 years speaks well for the dedication of the administrators, physicians and attornies who serve on the panels.

• **Workers' Compensation.**—Nearly 30 years ago, the HMA introduced legislation guaranteeing injured workers the right to choose their own physician. Legislation requiring an annual adjustment in the schedule based on the Consumer Price Index was achieved by legislation fostered by the association. As changes in the Workers' Comp program occur, the HMA will continue to be involved.

• **Medicaid.**—The HMA has devoted many hours and resources to the Hawaii Medicaid

program. Freedom to choose a physician, an equitable reimbursement for services rendered, and various experimental programs to encourage early medical encounters have all been fostered by the HMA. When the program shifted to QUEST, HMA continued to express concerns regarding quality of care, access to care, and other issues related to managed care.

• **Continuing Medical Education.**—The HMA became the agency in Hawaii responsible for surveying and accrediting Hawaii hospitals and other institutions to enable them to offer Category 1 CME programs that conform to national standards. HMA has sponsored its own annual CME program for physicians, a tradition which has been upheld since the early 1900s.

• **Malpractice Insurance.**—When professional liability insurance carriers left the state in the early 1980s, HMA was again involved in exploring various options for its members. After first considering the formation of its own physician company, the association attracted the Medical Insurance Exchange of California to enter Hawaii. The relationship with Hawaii physicians has been outstanding.

• **Legislation.**—This column is much too limited to list all of the legislative action that has been achieved since statehood. Laws about peer review committee immunity, living wills, immunity for good samaritans, child protection laws, emergency medical services, the establishment of the school health program, physician-patient privileged communication, and many others have all been fostered by HMA. HMA's legislative staff monitors the nearly 4,000 bills introduced annually.

No space is being devoted to the issues we have prevented from happening: they too form a lengthy list. It is somewhat similar to preventing disease by immunizations—as long as we prevent the disease, we sometimes forget or question the importance.

Many nonmembers benefit from the efforts of the HMA. However, without support from all medical doctors and osteopaths, our power and activities are limited. Our profession needs all of our support. Send in your dues today or request a membership application if you have not already joined.

Medicine in Transition

HPPA — Managed care by physicians for physicians offering will be available soon. Complete form for information.

Hawaii Pacific Physicians Association (HPPA), a for-profit corporation, represents an alliance of the Hawaii Medical Association and the Pacific Medical Administrative Group. Recognizing the radical changes in the health care delivery system, this organization has formed to provide what it believes is a positive response to changes taking place in the medical market place. HPPA's mission will be to carry out cost-effective, quality health care for Hawaii and the Pacific basin.

As chairman of this organization, I must give credit to the originating members and directors who spent many hours and much more in developing and implementing this concept of a for-profit statewide physicians network.

Bernard Fong MD, Vice Chair, HPPA
Clifford Chang MD, President, PMAG, Director
Carl Lehman MD, President, HMA, Director
John H.S. Kim MD, Director HPPA
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The physician-directed model will provide an alternative to current managed care plans. The goals are to preserve the excellence of health care in Hawaii, to maintain care for our patients, to maintain an organization controlled and driven by physicians, to develop a statewide provider network, to provide effective quality assurance and utilization review among physicians, to carry out responsible peer review, to effect changes in physician's practice patterns when appropriate, and to reward risk-sharing appropriately.

HPPA will aim to provide cost-effective, quality care while preserving the patient-physician relationship and maintaining access to care. Medicine is in transition and the delivery of health care is in transition. HPPA believes physicians must direct these changes and physicians must take the lead in identifying solutions for the future, developing strategies for accomplishing them, and finally communicating with physicians the success of their efforts.

For more information and to be on the mailing list, please fill out the form below and mail or fax it to HPPA.

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Medical School Hotline

The Role of Epidemiology in Medical Education

Beatriz L. Rodriguez MD, PhD, J. David Curb MD, MPH, Helen Petrovitch MD, Kamal H. Masaki MD

The multiple disciplines that contribute to the knowledge about health and disease can be categorized into three areas: clinical medicine, bench science, and population-based medicine. Population medicine, in contrast to clinical medicine, is focused on the community as opposed to individuals. Epidemiology is the discipline that provides population medicine with a systematic approach to study the patterns of occurrence of disease and delivery of medical care.[1] Originally epidemiology was concerned with providing the methodology for the study of population epidemics. Today it has a broader scope—the study of health and disease in human populations. Some of these topics include chronic and acute illnesses, health care utilization,[2] and molecular epidemiology. Information derived from epidemiologic studies is utilized to design programs for prevention and control of disease.[1,3]

Although the importance of epidemiology and its role in preventive medicine is increasingly being recognized by the medical community and the public, its role in medical education needs to be emphasized. Medical students and residents often lack the motivation to study epidemiology because they think of it as a peripheral discipline in medicine that may not be directly relevant to clinical practice.[4]

However, clinical medicine, bench science and population medicine are highly interrelated. Physicians often use information derived from epidemiologic studies in practice. The age, sex, occupation, behavioral characteristics of a patient, and the knowledge about the prevalence of a disease in the community must be considered when making a diagnosis. In the same manner, the accuracy of individual diagnoses made by clinicians and the completeness with which reportable diseases are made known to health authorities are essential in the assessment of occurrence of disease in a community.[1] Nobody would expect to understand a disease without the knowledge of its clinical findings and pathology. However, many physicians have little knowledge about another important aspect, the study of disease in relation to populations.[5]

Cardiovascular diseases provide an example of the importance of epidemiology and prevention. Since 1960, there has been a decline of nearly 50% on the rates of cardiovascular disease mortality in the United States. Most data suggest that primary prevention played a significant role in this decline. During these years, the prevalence of cigarette smoking and blood cholesterol levels have decreased and blood pressure is also better controlled.[6] These trends are greatly influenced by the interaction of the medical practitioner with each of his or her patients. In many cases, the impact of these life-style changes promoted by physicians may have only a moderate impact on the health of a particular individual; however, when these changes occur in many individuals, they can have a major impact on health at the population level. Thus, it is essential that medical students understand the importance of their role in the promotion of health in their communities.

After completing formal medical training, most physicians depend on conferences and medical journals to learn about advances in medicine and for making treatment decisions in individual cases. Evidence-based medicine, decision analysis, and clinical decision making are rooted in the use of epidemiologic methods and principles. Epidemiologic methods have specific techniques for data collection, analyses and interpretation of results, and jargon of technical terms. Therefore, it is crucial that physicians have a basic understanding of the principles of epidemiology prior to completing their training. Physicians must be able to evaluate critically the medical literature in order to judge the strengths and limitations of data on which they will base clinical decisions. In general, medical students and residents are interested in the content of epidemiologic studies and their application to clinical settings. However, an understanding of the methods used to conduct the studies is necessary to determine if the conclusions of the study are valid.

Critical review of journal articles can be used to motivate physicians in training to learn epidemiology.[4] Often, fellows and academic physicians who have not had training in research methods develop clinical studies without seeking appropriate advice. Thus, these projects encounter problems with funding and the publication of manuscripts. These studies are often based on good ideas, and would yield valuable results if appropriate methods were used.[5]

Two years ago, the John A. Burns School of Medicine at the University of Hawaii at Manoa formed the Division of Clinical Epidemiology within the Department of Medicine. This division, which works closely with the Division of Geriatric Medicine, conducts large epidemiologic research studies funded by the National Institutes of Health including: the Honolulu Heart Program, the Honolulu-Asia Aging Study, the Women's Health Initiative (Women's Health Hawaii), Genetic Determinants of High Blood Pressure (SAPPHIRe), and a study on Macronutrients and Blood Pressure (INTERMAP Hawaii) among others. Geriatric Medicine and General Medicine fellows at the University of Hawaii Department of Medicine attend a weekly course on research methods conducted by the Divisions of Clinical Epidemiology and Geriatric Medicine. Many of these fellows have had the opportunity of being directly involved in some of these important investigations and are learning research methods from this experience. It may be considered beneficial to expand this program to include all medical students and residents in schools of medicine.

Divisions of Clinical Epidemiology
and Geriatric Medicine
John A. Burns School of Medicine
University of Hawaii, Manoa

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Early Experience with Inhaled Nitric Oxide for the Treatment of Infants and Children with Pulmonary Hypertension

David Easa MD, Daniel T. Murai MD, Brian Oka RRT, Marshall Dressel MD,
Paula Vanderford MD, Susan Pelke RN, and Venkataraman Balaraman MBBS

When nitric oxide (NO), an endogenous regulator of smooth muscle tone, is administered by inhalation, it acts as a selective pulmonary vasodilator. This report details the treatment with inhaled NO of the first 11 patients in Hawaii.

Introduction

This report describes the development of the inhaled nitric oxide (NO) program and our initial experience with NO for pulmonary hypertension at Kapiolani Medical Center for Women and Children (KMCWC). NO, a clear, colorless gas,[1] is a component of the air we breathe as measured in parts per billion (ppb).[2-3] It also is found in higher concentrations of parts per thousand (ppt) in cigarette smoke.[4] In higher concentrations, NO is toxic and capable of causing acute pulmonary injury and death.[5] Furthermore, in the presence of oxygen, NO combines to form nitrogen dioxide (NO_2), another toxic gas.[6] The Environmental Protection Agency set the upper limit of exposure to NO and NO_2 at 25 ppm and 5 ppm, respectively.[7]

Over the last few years, NO has been identified as the endothelium-derived relaxing factor (EDRF).[8] This factor facilitates smooth muscle relaxation[9] and is an endogenous regulator of smooth muscle tone.[10-11] In the vascular endothelium, NO is synthesized from the amino acid L-arginine,[10] and readily diffuses into adjacent smooth muscle cells where it activates guanylate cyclase to form cyclic guanosine monophosphate (cGMP).[10] cGMP mediates smooth muscle relaxation by complex intracellular mechanisms.

This understanding of the role of NO in smooth muscle relaxation led to its clinical use as a therapy for patients with pulmonary hypertension.[12-14] It was determined that inhaled NO could reduce pulmonary vasoconstriction and shunt fraction, thereby improving oxygenation in these patients.[11] It also was found that inhaled NO is a selective pulmonary vasodilator. As NO diffuses through the smooth muscle cell into the blood vessel, it rapidly combines with hemoglobin to form methemoglobin;[10,15] free NO does not circulate in, and therefore does not affect, the systemic circulation.[12]

As of 1994, it has been estimated that more than 1,000 patients have been treated with inhaled NO worldwide. Subsequently, the use of inhaled NO in infants and children with pulmonary hypertension has increased.[11,16,17]

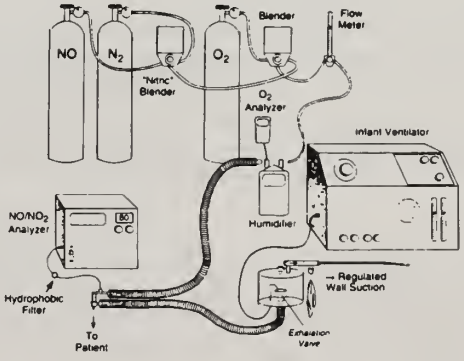
Methods

After review of the literature, consultation with national experts and personal experience at Massachusetts General Hospital by one of the authors (BO), the Department of Neonatology at KMCWC began the process of developing an NO therapy program for infants and children. The Food and Drug Administration approved our Investigational New Drug application for the rescue use of NO in infants and children with documented pulmonary hypertension and systemic hypoxemia. The protocol then was approved by our medical center's Institutional Review Board. In addition, separate animal studies were carried out to gain experience with NO administration before subjecting human infants to this new form of therapy. The following equipment and supplies were necessary (Fig 1).

Nitric oxide.—Nitric oxide is mixed with nitrogen (N_2) as an inert diluent at a concentration of 800 ppm.

Blender and connections.—Levels of NO concentration were adjusted using a blender connected with oxygen. The concentration of NO was measured by electrochemical analysis in parts per million.

Fig 1.—Basic nitric oxide (NO) delivery system using a double blender technique and NO analyzer, modified for a time-cycled, pressure-limited infant ventilator. Reprinted with permission.[21]



Departments of Pediatrics and Respiratory Care
Kapiolani Medical Center for Women and Children;
Department of Pediatrics, Tripler Army Medical Center
Honolulu, Hawaii

Address correspondence to:
David Easa MD
Kapiolani Medical Center for Women and Children
1319 Punahou Street, Honolulu, HI 96826
Phone: (808) 973-8670, FAX: (808) 949-4232

Pulmonox electrochemical analyzer.—Electrochemical analysis was used for all NO and nitrogen dioxide measurements (Pulmonox II, Pulmonox Research and Development Corp, Alberta, Canada).

Exhalation scavenging device.—The exhalation block of the ventilator was enclosed by a custom-made plastic bottle connected to the wall vacuum set at -100 cmH_2O. NO_2 analysis verification was performed around this scavenging system with a Drager NO_2 chemical analyzer.

Ventilators.—NO was utilized only with conventional ventilators (Sechrist Infant Ventilator, Sechrist Industries, Anaheim, California; Servo 900C Ventilator, Siemens-Elema, Sweden).

Methemoglobin analyzer.—Methemoglobin levels were analyzed utilizing a co-oximeter (2500 Series, Ciba Corning, Medfield, Massachusetts) at 1, 2 and 4 hours after initiation of NO, then every 6 to 8 hours until stable while on ≥ 40 ppm. When NO was weaned to < 40 ppm, methemoglobin levels were followed every 12 hours.

Eligibility criteria.—To receive NO, patients were required to meet the following criteria: 1) ≥ 34 weeks of gestation for infants; 2) evidence of pulmonary hypertension by systemic hypoxemia ($AaDO_2 \geq 600$ torr or $PaO_2 \leq 70$ torr in FiO_2 1.0 on two arterial blood gases 30 minutes apart) with echocardiographic confirmation of pulmonary hypertension; 3) poor response to conventional or high frequency ventilation with mean airway pressure >12 cmH_2O; 4) increasing inotropic drug support; and 5) informed parental consent. We excluded infants with inoperable life-threatening anomalies. Common diagnostic categories included meconium aspiration syndrome, pneumonia and sepsis, diaphragmatic hernia, acute respiratory distress syndrome (ARDS), and postoperative patients with congenital heart disease.

Procedures.—Infants were placed on the conventional ventilator with the NO blender attached. We frequently attempted to use respiratory alkalosis therapy (pH ≥ 7.6 and $PaCO_2 \leq 20$ torr) to ensure adequate lung expansion and improve the chances for response to NO therapy during NO insufflation.

We used an initial dose of 40 ppm to 80 ppm. This dose allowed the clinician to immediately differentiate between responders and non-responders. Response was defined in an infant as a twofold increase in PaO_2. Failure to respond to NO therapy is an important determination and could be criteria to transfer the infant for extracorporeal membrane oxygenation (ECMO) therapy.

Determination of response to NO was usually made in the first 30 minutes after initiation. If the patient was a responder, small decreases in NO concentrations were made in proportion to the extent of the increase in PaO_2 >150 torr. The reductions were as small as 5 ppm to as great as 20 ppm at any one time. The goal was to lower the NO concentrations as quickly as possible to 5 to 6 ppm to reduce the risk of methemoglobin or NO_2 toxicity.[6,10,11] Accordingly, NO was preferentially weaned before attempting any reduction in oxygen or ventilator settings.

Non-ventilator conventional management continued during NO therapy and included minimal stimulation, medications such as fentanyl, Versed and pancuronium, pulmonary physiotherapy and suctioning. We maintained mean arterial pressures between 60 mmHg to 75 mmHg with varying combinations of dopamine, dobutamine, and amrinone and with fluid boluses.

Results

Of the 11 patients treated with NO to date, one was admitted to the pediatric intensive care unit; the others were neonates admitted to the neonatal intensive care unit. Two of these infants were transferred from other hospitals (Kaiser Medical Center, Tripler Army Medical Center) for NO therapy; two were transferred from other islands for treatment of congenital heart disease and diaphragmatic hernia; the remaining patients were born at KMCWC.

Seven of the 11 patients responded to NO therapy, with a mean increase in PaO_2 of 166 torr within 12 hours after NO was started. One infant, whose PaO_2 did not respond dramatically or consistently to NO, was considered a responder because his condition stabilized and he became easier to manage once NO was begun. NO was administered for an average of 105 hours (range 1 to 469 hours). The baseline methemoglobin level was < 2% in all but one infant, whose initial level after beginning NO at 60 ppm was 4.3. However, this level rapidly decreased to 1.1 within one hour after reducing the NO to 40 ppm. Otherwise, the maximum methemoglobin level recorded during therapy was 2.6. Platelet counts were normal or near normal.

Four patients did not respond to NO therapy. The first nonresponding infant had meconium aspiration syndrome and poor cardiac contractility, both factors known to decrease the success of NO therapy. This infant survived after transport to the Mainland for ECMO. Another nonresponding infant in retrospect was thought to have more pulmonary than pulmonary-vascular disease. The last nonresponding infant had congenital diaphragmatic hernia and died of that primary diagnosis. The only older child treated with NO was a three-year old who was critically ill with ARDS and pre-existing central nervous system disease. He was treated with NO for only one hour after not responding to conventional therapy. He did not respond to NO and died of his other diagnoses.

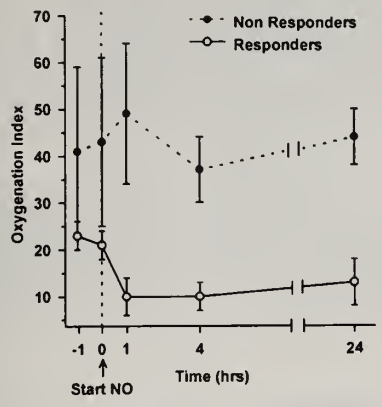
A summary of treatment and outcome information is shown in Table 1; the average oxygenation index (OI) is plotted before and after NO therapy in the responding and nonresponding infants in Figure 2.

Table 1.—Nitric Oxide Treatment and Outcome Data

Pt No	Birth Weight	Diagnoses	Treatment Duration	Maximum Dose	PaO_2 Pre/Post NO	Outcome
1	2840	MAS	2 hr	80	54/34	ECMO-survived
2	2650	MAS/pneumothorax	122 hr	40	73/297	survived-anatomic brain anomaly
3	3020	coarctation	469 hr	20	65/365	survived-seizure disorder
4	4600	pneumonia/DIC	76 hr	60	38/216	survived
5	3 yo	ARDS	1 hr	80	46/45	died
6	2790	MAS/pneumonia	112 hr	40	53/120	survived
7	3731	MAS/blood aspiration/ pneumonia	170 hr	52	90/270	survived
8	3365	MAS/pneumothorax/ pneumonia	72 hr	40	43/172	survived
9	3722	MAS/pneumonia	4 hr	60	82/84	survived
10	3099	CDH	14 hr	80	48/42	died
11	3610	MAS/pneumonia	114 hr	40	67/150	survived

NO, nitric oxide; MAS, meconium aspiration syndrome; ECMO, extracorporeal membrane oxygenation; DIC, disseminated intravascular coagulopathy; ARDS, acute respiratory distress syndrome; CDH, congenital diaphragmatic hernia.

Fig 2.—Oxygenation Index (OI) values in 7 responding and 4 nonresponding patients to inhaled nitric oxide. Values represent mean ± standard deviation. OI = (Mean airway pressure x FiO_2 x 100)/PaO_2.



Discussion

Although anecdotal, we are encouraged that NO contributed significantly to the survival and recovery of these critically ill infants who were not responding to conventional therapies. Randomized, controlled trials comparing NO to conventional therapy will be needed to definitively prove the value of NO therapy; such trials are currently being conducted in other centers. However, it is clear from anecdotal experience from other tertiary centers around the country that there is significant variability in response to NO therapy from center to center.

At this point in our experience, several observations suggest there are important factors enhancing the success of NO therapy. The four most important factors associated with a good response include: high systemic arterial pressures (means of > 60 mmHg); adequate lung volume as evaluated by frequent chest x-rays; normal cardiac contractility; and maintenance of respiratory alkalosis with pH ≥ 7.6 and $PaCO_2$ ≤ 20 torr.

When the above factors were controlled, the lability in oxygenation was dramatically reduced, especially during attempts to wean the infant from ventilator support. Lability in oxygenation is of concern since it indicates the presence of pulmonary vasospasm which could lead to severe hypoxemia, acidosis, and death. Previously, systemic vasodilators such as tolazoline were used in an attempt to reduce this lability.[18] However, these drugs frequently dilated both pulmonary and systemic vascular beds resulting in systemic hypotension and further instability.[19] Because inhaled NO is inactivated by immediately combining with hemoglobin after diffusing into the systemic circulation,[10,15] it acts as a selective pulmonary vasodilator. Neither systemic hypotension nor lability of oxygenation was observed in infants responding to NO treatment. Thus, any deterioration during weaning attempts was easily reversed by returning to baseline conditions. Finally, this stability in oxygenation should promote future confidence in the treatment of these infants, knowing that the use of NO allows for more forgiving clinical management.

Until the benefits of this therapy are proved in randomized trials and adequate followup studies, we believe the most important consideration in the use of NO is safety.[10,11,20] NO should be used in the lowest concentration possible in order to avoid any potential toxic effects.[20]

In summary, we have presented the background knowledge and process that led to our use of this experimental therapeutic gas. Our initial experience with NO therapy has been encouraging, and we anticipate greater success with more experience. Furthermore, we speculate that future uses for inhaled NO therapy will be found other than those characterized strictly by pulmonary hypertension. These may include such conditions as bronchopulmonary dysplasia, chronic lung disease, viral and bacterial pneumonia, respiratory distress syndrome, and ARDS. Oxygenation in these disorders may improve from the reduction in shunt fraction seen with the use of this selective pulmonary vasodilator.[20]

Acknowledgments

We thank Kapiolani Medical Center for Women and Children for support with equipment purchases and the Respiratory Care and Neonatal Intensive Care Unit nursing staff for their expertise in implementing this program.

Addendum

Since submission of this paper, we have treated an additional 19 infants with NO. Thirteen of the last 15 treated infants responded to NO; the only infant who died had pulmonary hypertension complicated by diaphragmatic hernia. We believe that the improved response and survival were due to the beneficial effects of a learning curve. Furthermore, we credit the improvement in results to the liberal use of fluids to expand blood volume, pressors to maintain blood pressure, exogenous surfactant to reverse surfactant dysfunction, and diuretics after the initial period of stabilization to reduce pulmonary congestion. Finally, our current approach is to begin NO at 20 ppm and increase to 40 ppm only when necessary.

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Shrinking the Western Pacific: Psychiatric Training for Medical Students from Micronesia

Dykes M. Young MD and David Bernstein MD

In 1989 the Hawaii State Hospital became the primary site for clinical teaching of psychiatry to students of the Pacific Basin Medical Officer Training Program, a program designed to train clinicians for the western Pacific. The psychiatry clerkship was developed to provide practical training in psychiatry to clinicians who will practice in Micronesia. Challenges encountered by the educators, including transcultural issues, are discussed. Interventions found to be effective in resolving these challenges are described.

The Region

The term *Micronesia* was originally a cultural designation. However, since the region is inhabited by eight sufficiently diverse cultural groups, the term, as a cultural designation, has little meaning. Today the term is used to refer to a geographic area in the western Pacific that covers three million square miles of ocean with an area of habitable dry land half the size of Rhode Island. About 175,000 people call one of the 2,200 islands of Micronesia home and reside in one of the four newly created political entities: Belau, Federated States of Micronesia (FSM), Republic of the Marshall Islands, or the Commonwealth of the Northern Marianas.[1]

At the end of World War II Micronesia came under the joint trusteeship of the United States and the United Nations. In 1986 the FSM entered into "Free Association" with the U.S.[2]

Historical Background

Since the close of World War II many efforts were undertaken to supply physicians to the Pacific Island nations. For the most part these efforts were unsuccessful and the shortage of physicians in the area continued. Of all the attempts to supply physicians to the region, the Pacific Basin Medical Officer Training Program (PBMOTP) has been the most successful.



Pohnpei Public Health Department .

In 1986 the John A. Burns School of Medicine of the University of Hawaii (JABSOM) contracted to design and administer a program that would train enough physicians to meet the needs of the U.S.-associated islands of Micronesia. The first class of 23 students entered the five year program, based in Pohnpei in January 1987. The program features early introduction to the clinical setting, with basic sciences integrated over five years. Medical officers initially received training in psychiatry in Guam. When the Guam facility closed, arrangements were made for the students to receive their psychiatric training at Hawaii State Hospital (HSH), a psychiatric hospital affiliated with the University of Hawaii.

Overview of the Psychiatry Clerkship

Two PBMOTP students at a time come to HSH for a six week psychiatry clerkship. During the rotation the students are housed on the hospital grounds. The students follow assigned patients. Didactics in psychopathology, psychopharmacology, and child psychiatry are provided by JABSOM faculty. The students attend and participate in ward rounds, therapy groups and meetings of Alcoholics Anonymous. They visit a community mental health clinic and treat patients on an emergency psychiatric service.

The cultural diversity of the patient population at HSH offers an exceptional opportunity for training for the PBMOTP students who may treat culturally diverse patient populations when they return to Micronesia.

Specific Challenges

The islands of Micronesia have few of the distractions of urban life compared to the island of Oahu, the site of HSH. On some

John A. Burns School of Medicine
The University of Hawaii
1356 Lusitana Street
Honolulu, Hawaii 96813



UH Pediatric Professor Dr Rudolfo Rudoy with medical officer students on the pediatric ward of Pohnpei Hospital.



Medical officer students participated in the revival of the Pacific Basin Medical Association last year.

Micronesian atolls there are no automobiles or bicycles. When they arrive on Oahu some students are distracted by the urban setting and neglect their studies. The clerkship director has found it helpful to allow the students ample time to take advantage of the culturally enriching opportunities that Honolulu has to offer.

The psychiatry training of students in the PBMOTP poses specific problems for the educators. Investigators have documented differences between U.S. and non-U.S. physicians in their attitudes toward mental illness.[3] The Micronesian students seem to have a greater tolerance for psychopathology than the North American students. For example, the PBMOTP students are less likely than their North American colleagues to perceive auditory hallucinations or loosened association as abnormal. Perhaps this difference between North American and Micronesian students is because these psychotic symptoms can result in less impairment in Micronesia, where the economy is based largely on fishing or subsistence farming, than in North America, where the economy is currency-based.

In order to provide the students with training that is culturally relevant to the patients that the medical officers will treat, the preceptors work toward raising the students' awareness of the Western medical model of mental illness, but not necessarily toward having the students embrace these Western models. None of the current educators has had any clinical experience with psychiatric patients in Micronesia. An effort has been made to learn from the students the kinds of psychiatric problems common to Micronesia. Review of the available literature on psychopathology in Micronesia has been helpful in tailoring training to meet the needs of the medical officers. For example: an unusually high focus of psychotic disorders in Belau has been described.[4] Educators attempt to provide especially intensive training in the treatment of psychosis to students who intend to practice in Belau.

The students in the PBMOTP show a passive learning style as compared to the North American students. They ask few questions and are hesitant to participate in case discussions even when they are encouraged to do so. The JABSOM faculty has found that patience and positive reinforcement result in the students taking a more active role.

The psychiatric formulary in Micronesia is limited to three neuroleptics (haloperidol, chlorpromazine, and fluphenazine), three tricyclic antidepressants: carbamazepine, lithium, and diazepam. Many patients at HSH are treated with newer atypical antipsychotics and serotonin-specific antidepressants. Familiarity with these newer medications is of little practical value when the students return to Micronesia. The educators make an effort to teach the students how to treat patients with the agents that are available in Micronesia.

Even more challenging to the Micronesian medical officer is the current lack of facilities in Micronesia for measuring serum lithium levels. During the clerkship an effort is made to train students to be sensitive to the clinical manifestations of early lithium toxicity rather than to rely on serum measurements.

Investigators have reported high rates of suicide in Micronesia.[5] The PBMOTP students corroborate these reports, especially for adolescent and young men. For this reason considerable effort is invested in teaching the students how to assess for suicide risk. Rates for alcoholism also are reported to be high in Micronesia. Not surprisingly, some of the PBMOTP students themselves may have suffered from alcohol abuse or dependence during their training. An effort is made to familiarize the PBMOTP students with chemical dependency treatment programs at HSH. Though 12-step programs are the mainstay of chemical dependency treatment at HSH, only one student has been aware of the existence of an Alcoholics Anonymous group meeting in Pohnpei. Some of the medical officer students have expressed interest in advocating for the development of more chemical dependency treatment programs in Micronesia when they return.

Discussion

The PBMOTP has almost reached its original goal of training 80 physicians for Micronesia and is scheduled to come to a close in 1996. The psychiatry rotation at HSH has been an enriching experience for both faculty and students. Despite the unique challenges of the clerkship arrangement discussed above, the program is successful in providing psychiatric training to medical students from Micronesia. The authors hope that other students and medical educators will benefit from these experiences of the PBMOTP psychiatry clerkship.

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Council Highlights

March 1, 1996
Roger T. Kimura MD

The HMA Council was called to order by HMA President Carl Lehman MD at 5:31 p.m.

Present: Officers: J. Spangler, President-elect; R. Kimura, Secretary; L. Howard, Treasurer; F. Holschuh, Immediate Past President; AMA Delegates: C. Kam, R. Stodd, AMA Alternate Delegate: A. Kunimoto; Speaker: H.K.W. Chinn; Vice-Speaker and Honolulu County President: P. Blanchette; Component Society Presidents: E. Bade, Hawaii; T. Smith, West Hawaii; Councilors: D. Canete, P. Chinn, P. DeMare, C. Fukino, R. Hollison, M. Shirasu, K. Thorburn, R. Wong, W. Young, J. Betwee, B. Shitamoto, P. Kim, C. Kadooka, A. Bairos; Past Presidents: W. Chang, W. Dang, A. Don, G. Goto, S. Wallach; Young Physician Delegate: C. Goto; HMA Alliance: S. Robinson.

HMA Staff: J. Won, B. Kendro, N. Jones, L. Tong, J. Estioko, P. Kawamoto, A. Rogness-recording secretary.

Minutes: The minutes of the February 2 meeting were approved as circulated.

• Dr Lehman reported: (1) that the Communications Commissioner, Dr Howard, will investigate the possibility of video conference and telephone conferences of HMA meetings; (2) he attended the Chaminade's Presidential Inauguration; (3) he visited Kauai County Medical Society to speak about HMA; (4) he met with the Governor who signed a proclamation for Doctors' Day on March 30; (5) he attended the Hawaiian Open which was sponsored by First Hawaiian Bank; (6) that Dr Roger Kimura and other physicians did a wonderful job at the Great Aloha Health and Fitness Expo; (7) he met with a few resident physicians to activate the Resident Physician Section; 8) that meals for committee meetings are to help physicians get through the hour and they are welcome to eat what is served or eat on their own after the meeting. (9) The Executive Committee voted to oppose a bill proposing a 4% tax on mutual benefit societies.

• The HMA Alliance reported: (1) that they are working on a project called Stop America's Violence Everywhere and will be looking for donations; (2) they are selling a cookbook called *Just What the Doctor Ordered* which will support the Parkinson's Support Group and the Children's Advocacy Center; (3) they are helping to sell books authored by Dr Ruth and Senator Matsuura at $8 a book or $50 for 8 books; (4) the Alliance will produce the talent portion of the Distinguished Medical Reporting Awards. They are encouraging physicians to buy a table for the DMRA.

For Action

• A motion was passed by Council to approve the Public Relations DMRA budget. Any profit from the event will be equally divided between the HMA and the HMA Alliance.

• A motion was passed by Council to support the concept of regional boards where community hospitals are situated.

• Council approved the Annual Meeting Committee's recommendations one to five on the financial aspects of the meeting. The banquet fee will be $62.50. The travel costs for exhibit booth installers need to be reviewed.

Council also approved the committee's recommendation No 6 that HMA sports events be open only to registered attendees of the HMA Annual Meeting.

A motion was passed by Council to change the name of the Sunday seminar to *The George H. Mills, MD Symposium* with a subtitle that can be changed annually.

• Council approved the Annual Meeting Ad hoc Committee's recommendation that the HMA Annual Meeting/Arrangements Committee proceed with planning of the 1997 Annual Meeting under the current structure until the results of a proposed membership survey are received and reviewed.

• A motion was passed to support the concept of restoring the funding for general assistance as a basic public health issue.

Component Society Reports

Maui.—Dr Shitamoto reported that Maui County will meet next week.

Kauai.—No report.

West Hawaii.—Dr Smith reported that a county meeting on the changing health care scene in Hawaii will be held.

Hawaii.—Dr Bade had no report.

Honolulu.—Dr Blanchette reported that there are several county meetings in the planning process. She showed Council the first issue of *Hawaii Medical News* and thanked Jan Estioko for her assistance. To improve the contents of the newsletter, please contact Jan with articles, etc.

For Information

Legislative.—Dr Howard reported that: (1) the Peer Review bill was held in the Senate Judiciary Committee; (2) the Informed Consent Bill was also held by the Senate Judiciary Committee. The House revision was never heard by the House Judiciary Committee; (3) Immunity for hospitals or health care organizations who contribute medical data information to the Hawaii Health Information Council Inc is likely to pass; (4) a surrogate medical decision maker bill which allows family members or partners to serve as the surrogate decision maker; passed out of Senate and will go to the House.

Dr Kam reported on the Workers' Compensation Administration bill that calls for a managed care system for Workers' Comp. HMA gave testimony in favor of alternate ways of providing health care. The progress of the bill will be monitored.

SHPDA.—Dr Holschuh introduced Marilyn Matsunaga, acting administrator for SHPDA. She is interested in cutting red tape and streamlining. In the last few months a test case was done to see how fast the agency can process a standard CON application. It was done in two months. She is hoping to implement this as the standard for the agency. She looks at SHPDA as one place where community grass roots people can have access to providers in a fair and consistently formal atmosphere. Some physicians at Council did not agree with her and she will be forwarded a copy of the Florida review which says that SHPDA allows the formation of cartels, etc.

Credential Verification Service (CVS).—Dr Lehman reported the CVS Committee is working on options. A phone conference is planned for March 5 with CIVS. The CVS Board will also address the control of data.

Hawaii Health Foundation.—Dr Shintani is forming a group and was funded $300,000 to study the diets of Hawaiians and health problems in Hawaii.

The meeting was adjourned at 8 pm.

Classified Notices

To place a classified notice:
HMA members.—Please send a signed and typewritten ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in *HMJ* as space is available.
Nonmembers.—Please call 536-7702 for a nonmember form. Rates are $1.50 a word with a minimum of 20 words or $30. Not commissionable. Payment must accompany written order.

Office Space

Medical Arts Bldg.—250 sq ft to 997 sq ft office space avail. Pharmacy, x-ray lab; Clinical Laboratories of Hawaii on-site. Call Chrissy Young (S), 524-2666.
Pearl City Business Plaza.—Long leases; 680+ sq ft; 24 hr security; free tenant/customer pkg; available now; call 531-3526 Gifford.
Fully furnished medical office space for rent.—Full/partial days. Opportunity to participate in clinical trials with established clinical research institute. Excellent Kakaako location in newly renovated building. Laboratory, x-ray, nuclear medicine on site. Additional physician support, including medical billing. Call 592-2639.

Position Available

Lahaina, Maui, Hawaii.—B/C/BE FP Well-established multi-specialty group. Ambulatory care, minimal call. Position available summer 1996. Send CV to Dr Gilbert, 130 Prison St, Lahaina, HI 96761.

Locum Tenens

Radiologist.—Available on short notice for locum tenens. Full or part time, any island. (808) 875-9794.

For Sale

For sale.— ASSI microsurgical instruments, incl forceps, needleholders, scissors, etc. in metal case and demagnetizer. Never used. Paid $1400. Asking $600. Keeler magnifying loupe. Never used. Pd $1000. Asking $500. Phone 988-6449 (evenings).

Practice For Sale

Medical office available.— Ala Moana Building. Will consider all offers. Call (808) 955-6666.
Beautiful rural Hawaii.— Southpoint area of the Big Island. Solo family practice. Mostly outpatient. ER coverage available. Flexible terms, (808) 929-9827.

Office to Share

Office to share.— Physician has space to share. Flexible arrangements. Kahala Mall, Office Tower. Call 735-7681.

Announcements

Grand Opening.— Waikiki Gallery at the Aston Park Shore Hotel, 2586 Kalakaua Ave, Opening art exhibit Louis Pohl and Juanita Kenda.* A portion of sale to HMA members supports HMA. For more info call (808) 922-7701.

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The Weathervane

Russell T. Stodd MD

Repentance is not so much remorse for what was done as fear of the consequences.

Rarely does the federal government file criminal antitrust charges against health care professionals, but it happened for only the second time in 50 years. The Justice Department proceeded successfully against the Lake County (Texas) Optometric Society charging that the group conspired to raise, fix, and stabilize the price of eye exams. The defendant pleaded guilty and agreed to pay a fine of $75,000 and the group has since disbanded. The Texas Optometric Association (Lake County was once a member) has taken no position on the case.

We hate the people we love because they are the only ones who can hurt us.

An HIV-positive man was hospitalized in a Florida hospital and was to be transferred to a hospital in Alabama. Because travel could not be arranged by ambulance, the patient's brother came from Mississippi to provide the transportation, but he did not know that his brother had AIDS. In transit a heparin lock was dislodged from the patient's arm, and fluid from the lock site contacted the brother's hands where he had multiple scratches from a recent fishing trip. Now the brother is HIV positive, and he brought suit against the Florida hospital. The Florida Supreme Court ruled that the complaint was not a claim for medical malpractice, and it was disallowed.

We are inclined to judge ourselves by our ideas; others by their acts.

W. Andres Harris MD, an ophthalmologist in Salem, Oregon, has again demonstrated that one man can make a difference. After learning that the U.S. Army was developing laser weapons that cause permanent blindness, Dr Harris wrote letters and articles calling public attention to improper use of this remarkable tool. Serving on the Board of Directors of Physicians for Social Responsibility, Dr Harris prodded the Board into forcing the Pentagon to abandon plans to spend $17 million to develop and purchase 75 of the high-tech weapons. Now, both the Department of Defense and the United Nations have adopted policy banning the use of lasers specifically designed to blind enemy forces.

You can fool all the people all of the time if the advertising is right and the budget is big enough.

About 12 years ago a prescient observer stated that radial keratotomy would not generate much market pressure because it required no major piece of technical equipment, and therefore no major industrial investment. With laser surgery, the opposite picture prevails as the media is planted with *news* stories, multiple educational symposia are offered, and daily mailers arrive promoting participation in an income-generating laser project. Tens of millions of dollars have been invested in the manufacture and certification of exotic lasers for PRK and cosmetic surgery, and the medical/industrial complex must be rewarded for risking their capital.

Hurry, Hurry, Hurry! Ladies and gentlemen, step right up and get...

The excimer laser photorefractive keratectomy (PRK) promoters have arrived in Hawaii. One plan offers, with just a $250 annual contribution, the surgeon can enjoy the privilege of referring his or her patient for laser refractive surgery which will be performed by the chosen ones. In return, the operating surgeon will kick back 40% of the laser fee, for "pre and post-op care." P.T. Barnum lives!

A man's dying is more the survivors' affair than his own.

Dr Gerald Klooster, Sr, a retired obstetrician, has developed Alzheimer's disease. A psychiatric examination of the patient's cognitive capacity revealed "severely impaired with a score of 2 out of 30," including inability to identify a wristwatch or describe how it was used, or to identify the month, year or location of the test. According to Dr Jack Kevorkian's attorney, the patient, in company with his wife, provided a notarized statement that he was mentally competent and declared "that he does not want to go through the throes of Alzheimer's." Dr K's attorney, Geoffrey Fieger, added that the "rest of the family is very supportive, except for one son (Dr Gerald Klooster, Jr, DO) who wants to declare his father mentally incompetent." In fact, Dr Klooster, Sr, has three other sophisticated, adult offspring, who have said only that they were against assisted suicide. Right-to-die activists claim that the case illustrated why we must have legalized euthanasia with strictly enforced safeguards, but opponents claim there is no way to protect the patient from overzealous friends or family members who wish them to exert their right to *die with dignity*. Meanwhile, Dr Kevorkian has opted out and wants no part of the family dispute.

God is love, but get it in writing.

"Be careful out there," goes a current parting phrase, and with good reason. In this era of defining informed consent, who are your friends, CYA, etc, it turns out that the HMOs are providing heavy financial support for the GOP, with not so much being spent on Democrats. Just two years ago in 1994, 12 of the largest HMOs contributed 60% of their campaign dollars to the Democrats, but in 1995, that number dropped to 25%, with 75% to Republicans, a dramatic reversal. The reason is simply that Republican plans for overhauling Medicare could result in doubling the number of beneficiaries in HMOs over the next seven years, and that would amount to about $85 billion in new business for the merchants of *managed* care. Don't forget the Golden Rule of the 1990s.

There were giants in the earth in those days.

Forgotten in the heat of Congressional jabberwocky is the fact that President Harry S. Truman in 1947 recommended term limits of 12 years for all Congresspersons (and the incumbents didn't like it then either).

Addenda

- HMO premiums are up, medical service is more restricted, but CEOs of HMOs average income is more than double the CEO national average.
- Ski injuries have increased 300% since 1985.
- A professor is one who talks in someone else's sleep.

Aloha and keep the faith—rts.


Michael D. Rudy, Esq.

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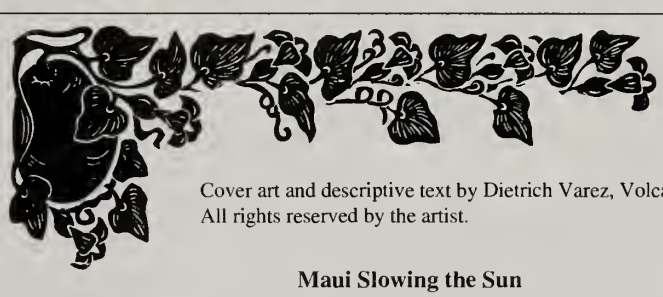
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Maui Slowing the Sun

The demi-god Maui slowed the sun to its present pace so that his mother would have longer days to complete her work of making *kapa*.

Hawaii Medical Journal Foundation

We have established a fund to help support the *Journal* during lean advertising times. All contributions are tax deductible and will be used for the *Journal*. Your check should be made payable to the *Hawaii Medical Journal Foundation*. The Editorial Board is very pleased that we already have received two $1,000 donations. The Board and I are very proud of the *Journal*, but we need more financial stability. Please consider a contribution—even a small one will help.

Norman Goldstein MD

Editorial

Norman Goldstein MD

A Lean but Strong *Journal*

The *Journal* is lean, but has a lot of good meat between its covers. Because of budgetary restraints, ie, q.n.s. funding *(Quantum non sufficit)*, the number of pages in our *Journal* is low—too low! But when you see the quality of clinical research projects, first case reports, and the variety of subjects we publish, you must agree that we are blessed with many knowledgeable and experienced physicians in Hawaii.

If you just scanned the paper by Easa and associates on their experience with inhaled nitric oxide for pulmonary hypertension in last month's *Journal*, look at it again. They treated 30 infants and children with very serious conditions, including acute respiratory distress syndrome, meconium aspiration syndrome, pneumonia and sepsis, and postoperative patients with congential heart diseases. Twenty of these patients improved, thanks to the team efforts at Kapiolani and Tripler Medical Centers.

Even a dermatologist should be interested in this paper. Men using Rogaine, topical minoxidil for alopecia, now available without prescription, might want to follow the research on nitric oxide. Cases of rapid onset of male baldness have been linked to an increased risk of coronary disease and have been implicated to a deficiency of scalp nitric oxide.[1-2] Stay tuned!

This issue contains a serious complication of heparin therapy: spontaneous pulmonary hemorrhage. Kok, Sugihara, and Druger report the first case of this problem associated with a commonly used drug, heparin.

The manuscript by Feinberg and Kelley should be of interest to all physicians, and especially primary care physicians and obstetricians/gynecologists. Employers and personnel department managers also will find a great deal of practical information about pregnant workers.

Thank You Mom

May 12 is Mothers' Day, just in case you forgot.

Mom is one of the most common of all tattoos. There are several reasons for this. Mom is a special, special woman; we all have one or had one; her name is easy to spell; and while a spouse or significant other may change, Mom is always Mom.

Plastic surgeon, Dr Bob Flowers, honors his Mom and ours with his special poetic tribute to all mothers.

1. Herrera, CR et al. Baldness and coronary heart disease rates in men from the Framingham study. *Am J Epic.* 195; 1420: 828-33.
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For Mom—by Robert S. Flowers MD

Dear God,
Help my mom
Throughout the day
She spends her time
To ease my way.

Give her love
And time to rest
And keep her safe
For she's the best...
Mom in the whole world. Amen.

Letter to the Editor

Frederick C. Holschuh MD

I was very pleased with the vog issue of the HMA *Journal*. Jan Estioko and Carol Uyeda did a fantastic job of bringing it all together. I think the vog issue makes a strong statement about the potential health effects of vog and how important it is to control smoking, as there is little we can do about the volcano. I inadvertantly omitted recognizing former Councilmember Merle Lai for her contribution to the Vog Authority's organization.

I want to thank one other person for her love, and her support and assistance with the vog data project: my wife, Diane. She helped retrieve some of the data and put up with many days and nights with the dining table covered with tabulations of emergency room asthma visits.

Military Medicine

Robert V. Hollison, Jr, COL, MC
Commander
Tripler Army Reserve Hospital Augmentation (TUHA)

Most Hawaii physicians are not aware of the presence of the large military health care system that plays a major role in caring for approximately 250,000 people of Hawaii and 850,000 Pacific Basin populations eligible for care. The most well-known health system that provides military medical care is Tripler Army Medical Center (TAMC). TUHA, a little-known army reserve unit, augments Tripler's capability if a major civilian/military disaster or military conflict erupted requiring movement of active duty Tripler physicians to areas of need. More than 70% of our armed forces medical assets are harbored in the reserve components. TUHA is the single-largest organized reserve medical unit in Hawaii and the Pacific. The primary mission of TUHA is to support TAMC in the event of military mobilization. This unit serves a secondary mission of providing medical support to more than 3,500 U.S. Army Pacific Reservists in Hawaii, Guam, Saipan, Samoa, and the Marianas. In addition, TUHA provides medical support to military exercises in Japan, and when needed, elsewhere in the U.S. Army Pacific's (USARPAC) and the Pacific Rim's area of operations. The area covered by USARPAC encompasses more than 51% of the world's surface and extends from Madagascar, India, China, and Korea, across the Pacific to Alaska, and southward to include all the major island populations in the South Pacific, Southeast Asia, and Australia. USARPAC covers more than two-thirds of the world's population and covers 12 time zones. Countries within its area of interest represent more than 50% of the U.S. trade partnerships with the United States.

TUHA's unit crest and motto are: *Haaheo I Ka Lawelawe*, which means *Pride in service,* and is something our people take seriously. TUHA currently has slots for only 165 reservists. We have 25 physicians and ancillary medical professionals, 30 nurses, and 110

➤ *Continued on Page 82*



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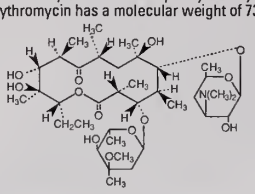
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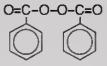
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Description: Each gram of Benzamycin® (erythromycin— benzoyl peroxide) topical gel contains, as dispensed, 30 mg (3%) active erythromycin and 50 mg (5%) benzoyl peroxide in a gel vehicle of purified water, carbomer 940, alcohol 20%, sodium hydroxide, docusate sodium and fragrance.

Erythromycin ($C_{37}H_{67}NO_{13}$) is produced by a strain of *Streptomyces erythraeus* and belongs to the macrolide group of antibiotics. Erythromycin has a molecular weight of 733.94 and is represented by the following structural formula:



Benzoyl peroxide ($C_{14}H_{10}O_4$) is an antibacterial and keratolytic agent. The structural formula is:



Clinical Pharmacology: Erythromycin is a bacteriostatic macrolide antibiotic, but may be bactericidal in high concentrations. Although the mechanism by which erythromycin acts in reducing inflammatory lesions of acne vulgaris is unknown, it is presumably due to its antibiotic action. Antagonism has been demonstrated between clindamycin and erythromycin.

Benzoyl peroxide is an antibacterial agent which has been shown to be effective against *Propionibacterium acnes*, an anaerobe found in sebaceous follicles and comedones. The antibacterial action of benzoyl peroxide is believed to be due to the release of active oxygen. Benzoyl peroxide has a keratolytic and desquamative effect which may also contribute to its efficacy.

Benzoyl peroxide has been shown to be absorbed by the skin where it is converted to benzoic acid.

Indications and Usage: Benzamycin Topical Gel is indicated for the topical control of acne vulgaris.

Contraindications: Benzamycin Topical Gel is contraindicated in those patients with a history of hypersensitivity to erythromycin, benzoyl peroxide or any of the other listed ingredients.

Precautions: General—For external use only. Not for ophthalmic use. Avoid contact with eyes and mucous membranes. Concomitant topical acne therapy should be used with caution because a possible cumulative irritancy effect may occur, especially with peeling, desquamating or abrasive agents. If severe irritation develops, discontinue use and institute appropriate therapy.

The use of antibiotic agents may be associated with the overgrowth of antibiotic-resistant organisms. If this occurs, administration of this drug should be discontinued and appropriate measures taken.

Information for Patients—Patients using Benzamycin Topical Gel should receive the following information and instructions:

1. Benzamycin Topical Gel is for external use only. Avoid contact with the eyes and mucous membranes.
2. Patient should not use any other topical acne preparation unless otherwise directed by physician.
3. Benzamycin Topical Gel may bleach hair or colored fabric.
4. If excessive irritation or dryness should occur, patient should discontinue medication and consult physician.
5. Discard product after 3 months and obtain fresh material.

Carcinogenesis, Mutagenesis and Impairment of Fertility: Long-term studies in animals have not been performed to evaluate carcinogenic potential or the effect on fertility.

Pregnancy Category C: Animal reproduction studies have not been conducted with Benzamycin® Topical Gel. It is also not known whether Benzamycin Topical Gel can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Benzamycin Topical Gel should be given to a pregnant woman only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Benzamycin Topical Gel is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children below the age of 12 have not been established.

Adverse Reactions: Adverse reactions which may occur include dryness, erythema and pruritus. Of a total of 153 patients treated with Benzamycin Topical Gel during clinical trials, 4 patients experienced adverse reactions, of whom three experienced dryness and one an urticarial reaction which responded well to symptomatic treatment.

Dosage and Administration: Benzamycin Topical Gel should be applied twice daily, morning and evening, or as directed by physician, to affected areas after the skin is thoroughly washed, rinsed with warm water and gently patted dry.

How Supplied and Compounding Directions:

Size (Net Weight)	NOC 0066-	Benzoyl Peroxide Gel	Active Erythromycin Powder (In Plastic Vial)	Ethyl Alcohol (70%) To Be Added
23.3 grams (as dispensed)	0510-23	20 grams	0.8 grams	3 mL
46.6 grams (as dispensed)	0510-46	40 grams	1.6 grams	6 mL

Prior to dispensing, tap vial until all powder flows freely. Add the indicated amount of ethyl alcohol (70%) to vial (to the mark) and immediately shake to completely dissolve erythromycin. Add this solution to gel and stir until homogeneous in appearance (1 to 1½ minutes). Benzamycin Topical Gel should then be stored under refrigeration. Do not freeze. Place a 3-month expiration date on the label.

NOTE: *Prior* to reconstitution, store at room temperature. *After* reconstitution, store under refrigeration. Do not freeze. Keep tightly closed. Keep out of the reach of children.

Caution: Federal (U.S.A.) law prohibits dispensing without prescription.

U.S. Patent Nos. 4,387,107 and 4,497,794.

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Reference:

1. Mills OH, Berger RS. A double-blind evaluation of tretinoin alone and in combination with erythromycin/benzoyl peroxide in acne valgaris, *Cutis*. 1992;49(6A):12-15.
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TUHA medical professionals got a little muddy during litter obstacle relays at Schofield Barracks as part of military/medical training to deliver medical care under adverse conditions.

enlisted personnel. In spite of reengineering efforts in the active duty and reserve armed forces, TUHA potentially could double in size and gain additional slots because the Asia-Pacific region has become so strategically important. This will create more opportunities for civilian physicians, nurses, LPNs, enlisted technicians (operating room, laboratory, x-ray technicians, dietary personnel, etc) and even dentists to participate in the Hawaii Army Reserve program.

Military drill at TUHA is usually the first weekend of the month (16 hours) or four 4-hour training periods spread over a month. Saturday duty consists of hospital activities for most of the personnel. Sundays are spent providing physical exam support for military reservists and medical or military education. Physicians frequently substitute in 4-hour-segments once a week at a Tripler clinic, in the operating room, or teaching residents. Substitute drill can be performed by providing community service projects or even attending continuing medical education (CME) conferences. TUHA also conducts two weeks of annual training usually during June or July. Some of this time also can be substituted with CME or other clinical duties. Reservists can retire from the active reserves and get retirement pay after 20 years of good qualifying service.

TUHA activities extend far beyond traditional hospital activities. TUHA holds medical and military training programs for the benefit of other reserve and active duty personnel from other units. Community service projects by our unit have included consistently over the years: An aid station for the Great Aloha Run, annual school physical exams during the summer, participation in health fairs, CPR training to external constituents, and Junior ROTC program support at Kaiser High School. Our reservists provide support not only to TAMC on their regular drill schedule, but also provide medical support to reserve units throughout Hawaii, Samoa, Guam, Saipan, Japan and elsewhere in Pacific. Commonly, teams of physicians, nurses, enlisted technicians and administrative support are required for civil-military exercises in remote places such as Thailand, the Philippines, Bangladesh, India, and Korea.

Most of the people in TUHA participate as health-care professionals who want to do their part in keeping this country strong. They are people of the highest professional and moral character; many are leaders in their communities. They share a common goal: to make a difference both in their civilian and military life as *citizen-soldiers*. There is no finer group of professionals who take to heart and live the TUHA motto, *Haaheo I Ka Lawelawe* or *Pride in service*.

First Case Report of Spontaneous Pulmonary Hemorrhage Following Heparin Therapy in Acute Myocardial Infarction

Lai Chow Kok MD*, J. Sugihara MD**, G. Druger MD**

Since its discovery in 1916, heparin has been used extensively for treatment of thromboembolic disorders. Bleeding is its most well-known and frequent complication. We are describing the first case report of overt pulmonary hemorrhage in a patient who received heparin after emergent angioplasty for prevention of coronary artery rethrombosis.

Bleeding is a well-known complication of heparin therapy but spontaneous overt hemorrhage in the lungs following heparin has not been described. The following report describes a case of spontaneous pulmonary hemorrhage that developed after heparin therapy in a patient who underwent angioplasty for his acute myocardial infarction (MI).

Case Report

A 72-year-old man was admitted to the emergency room 30 minutes after the acute onset of severe substernal chest pain. He had a history of end-stage renal disease and hypertension and had been on continous ambulatory peritoneal dialysis for the past 10 months. His blood pressure had been well controlled for the past year without any medication. There was no significant history of respiratory disease except for a right rib fracture sustained as a teenager. There was no history of any bleeding disorder. He had not smoked for more than 30 years and medications prior to admission were epoetin alpha (Epogen) and multivitamin supplement.

Upon arrival, his blood pressure was 122/72 mmHg with pulse rate of 76/min, respiratory rate at 20/min and temperature of 98°F. The physical examination revealed a well-developed man in moderate distress but was otherwise unremarkable. ECG demonstrated hyperacute ST elevation over leads V_2 to V_5. He was given 325 mg of aspirin and underwent emergent cardiac catheterization. Angiography showed a 95% stenosis of his left anterior descending coronary artery, which was treated with immediate angioplasty, resulting in a residual 25% lesion. A bolus dose of 10,000 units intravenous heparin was given prior to angioplasty; followed by continous infusion at 800 units/hr. Within the next 30 minutes, he developed an episode of hemoptysis and heparin infusion was stopped immediately. A Swan-Ganz pulmonary artery catheter was placed and the initial reading of his pulmonary artery pressure was 29/11 mmHg with pulmonary capillary wedge pressure of 17 mmHg and cardiac index of 3.1 L/min/m^2. His hemoptysis resolved the following two hours, at which time heparin infusion was resumed.

Initial laboratory results were hemoglobin 10.2 g/dl; hematocrit 30.2 %; white count 13,500/mm^3; platelet 265,000/mm^3; blood urea nitrogen 64 mg/dl; creatinine 3.8 mg/dl; prothrombin time (PT) 12.0 s (control 10 to 13 s); and activated partial thromboplastin time (PTT) 25.4 s. Arterial blood gas taken on room air showed pH 7.36, Pco_2 44 mmHg, Po_2 74.2 mmHg, oxygen saturation 92.7 %. Chest x-ray showed calcification of the posterior right pleural space, but was otherwise normal.

After heparin infusion was restarted, he developed hemoptysis again, which progressively worsened so that heparin had to be stopped. Repeat PTT three hours after the initial bolus dose was 92 s and it normalized within the next four hours. The bleeding time then was 9 minutes (upper limit of normal 9 min) and platelet count was 104 000/mm^3. Despite normal coagulation studies, he continued having hemoptysis for the next two days, dropping his hemoglobin level to 8.1 g/dl. He was intubated at the time of his respiratory distress. Bronchoscopy was performed which showed presence of large blood clots in the airways. He required transfusion of 5 units of packed red blood cells to maintain his hemoglobin above 10.0 g/dl. His chest x-ray showed pulmonary infiltrates which worsened over the following few days (Fig 1). He responded to supportive measures and his condition gradually improved. He was extubated on his sixth day post MI. Repeat bronchoscopy before extubation revealed presence of blood clots. No endobronchial lesion was seen. The patient was finally discharged from the hospital on the fourteenth day post MI after successfully undergoing cardiac rehabilitation protocol and repeat angiogram, which showed that his coronary artery lesion had remained patent.

Discussion

Heparin has been used in the treatment of unstable angina and acute MI as adjunct treatment to emergent angioplasty or thrombolytic therapy.[1] The most common side effect is bleeding. The lung is not usually known to be a potential site of bleeding. This is the first case report of a spontaneous, overt pulmonary hemorrhage following heparin therapy. A case of occult pulmonary hemorrhage following

*University of Hawaii
Integrated Medical Residency Program
**St Francis Medical Center
Department of Internal Medicine

Fig 1.—Chest x-ray



heparin therapy has been described earlier by Finley and colleagues.[2]

There have been three case reports in the English literature documenting pulmonary hemorrhage as a complication following thrombolytic therapy. In all three cases, the diagnosis was made based on the triad of hemoptysis, falling hemoglobin, and new pulmonary infiltrate on x-rays. Awadh and colleagues described a patient with pulmonary hemorrhage following streptokinase and heparin therapy.[3] Both streptokinase and heparin therapies may have contributed to the bleeding. Disler and Rosendorff[4] reported a case of pulmonary hemorrhage following intravenous streptokinase in a patient who had recently recovered from a lower respiratory tract infection. An unresolved pneumonia was implicated to have contributed to this complication. Nathan et al[5] described a similar case of pulmonary hemorrhage following thrombolytic therapy and in their case the patient had a Swan-Ganz pulmonary artery catheter placed prior to the onset of the hemoptysis. Thrombolytic therapy and the catheter may have contributed to this complication. Our patient received only heparin therapy, had no prior history of pneumonia or any lung disease, and developed an episode of hemoptysis prior to insertion of the pulmonary catheter, the proper position of which was confirmed radiologically. Continous monitoring of the wedge pressure did not show dampening to suggest *overwedging*.

There are two mechanisms whereby heparin is eliminated from the body. There is the rapid clearance by binding of heparin to receptors on endothelial cells and macrophages, whereby it is internalized and depolymerized. And the other is a slower mechanism of clearance which is mainly renal.[1] Renal failure is a known risk factor for heparin-associated bleeding.[6] However, in the presence of decreased renal clearance, hemostatic abnormalities such as prolonged bleeding time, impaired platelet adhesion or aggregration are usually reversible following dialysis. Age also has been shown to increase the incidence of bleeding with heparin use as demonstrated in a study by Jick et al[7] but the underlying mechanism of which is not well defined. Renal impairment and advanced age may have played a significant role in the development of spontaneous pulmonary hemorrhage in our patient.

Even though pulmonary hemorrhage is a clinical diagnosis based on the presence of hemoptysis, new radiographic pulmonary infiltrate, and falling hemoglobin; occult pulmonary hemorrhage without hemoptysis has been described.[2] Therefore this diagnosis should be kept in mind when dealing with patients who had thrombolytic and/or heparin therapy with progressive anemia. Magnetic resonance imaging (MRI) and diffusion capacity of carbon monoxide gas (DLco) have been described to aid in diagnosing the presence of blood in lung parenchyma. Both methods require specialized equipment and patients' cooperation which are not easily suitable for unstable patients. Bronchoscopy with bronchoalveolar lavage would be a more helpful tool in confirming the diagnosis. Hemosiderin score (an arbitrary score of hemosiderin content present in the mean of 100 macrophages) has been described to aid in the diagnosis, especially in occult hemorrhage.[2]

Conclusion

In summary, we report the first case of spontaneous overt pulmonary hemorrhage following heparin therapy. The patient's advanced age and renal condition have contributed to this complication. Heparin should therefore be used with caution in elderly renal patients. Awareness of this potential complication may help minimize the morbidity and mortality inherently present with its use.

Acknowledgements

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The Pregnant Worker: How Much is Too Much? Assessing Safe Activity Levels

Jason S. Feinberg MD*, Charles R. Kelley MD, MPH**

Physicians should be able to advise pregnant women about safe amounts of physical activity in the workplace. A computerized literature search was used to review reproductive risks of physical activity, proper clinical evaluation and recommendations of the pregnant worker regarding physical activity, and current State of Hawaii disability legislation pertinent to pregnant workers. This article highlights the importance of making accurate clinical assessments regarding the continuation of work for the healthy pregnant worker and also provides physicians with an approach to assessing physical exposure risks of pregnant workers.

Introduction

The demographics of the work force have dramatically changed in recent decades. Today, with equal employment opportunities, women now constitute nearly 50% of all workers and a majority of working women are within their reproductive years.[1] Women are increasingly employed in occupations requiring strenuous physical activity including prolonged standing, lifting heavy objects, and climbing stairs and ladders. These factors in some instances can pose risks to the pregnant worker and developing fetus.

In Hawaii, a physician's certification that a worker is disabled secondary to her pregnancy can result in significant financial burden to the employer and the employee. The mandatory temporary disability insurance law (TDI) in Hawaii requires employers to cover 58% of a pregnant worker's salary for up to 26 weeks if certified by a *licensed practitioner*.[2] This translates into significant loss to the employer (58% of a paid workday) or a 42% wage loss by the patient if sick leave is not applied. Therefore, in a era of both health care and industrial reform, physicians must employ sound medical knowledge when assessing the employment status of the pregnant worker.

Physicians often give advice regarding work and physical activity during pregnancy, and at times, this advice is based on social and cultural beliefs rather than on scientific merit. It is important that physicians who evaluate pregnant workers be aware of the current available data and guidelines that help define safe levels of physical activity during pregnancy. Not removing a pregnant worker from a known hazard can result in both maternal and fetal harm. Removing a pregnant worker from work when no significant hazard exists also is quite undesirable as it may negatively affect workers' careers, increases the cost of business, and tarnishes the medical professions' reputation.

This article reviews legislation in Hawaii which mandates employer compensation of the pregnant worker, reviews recent studies that identify potential reproductive risks of physical exertion during pregnancy, and provides physicians with an approach to assessing and ensuring safe activity levels of the pregnant worker.

Compensation of the Pregnant Worker

In many states pregnancy is not considered a disability that qualifies for paid pregnancy leave from employment. In these states, the issue of paid leave for pregnancy is usually decided by individual employment policies. Such policies often utilize a worker's sick leave, and compensation may be full or a reduced percentage of the worker's average weekly pay. The duration of benefits tends to vary and generally does not exceed six weeks. The Family and Medical Leave Act of 1993[3] is a federal law which mandates that employers grant up to 90 days of unpaid leave to pregnant workers. The Family and Medical Leave Act also provides job security, safeguarding a worker's previous job on return to employment within 90 days.

In Hawaii as well as other states, Temporary Disability Insurance Law (TDI) is mandatory and applies to pregnant workers. In Hawaii, the current premium cost is 80 cents per $100 of wages which is usually shared by the worker and employer. Worker contribution cannot exceed one-half the premium cost and not more than 0.5% of weekly taxable wages. TDI benefits begin on the eighth day of disability and can extend a maximum of 26 weeks during a benefit year. The injury or illness causing disability cannot be work related and must prevent job performance. A worker must be employed before the date of illness or injury and the disability must be certified by a licensed physician, surgeon, dentist, chiropractor, osteopath, naturopath, or an accredited practitioner of a faith-healing group. Current reimbursement benefits of TDI include up to 58% of average weekly wages but not more than the maximum weekly benefit annually set by the Disability Compensation Division (in the 1994 maximum benefit was $338).[2]

➤ *Continued on Next Page*

*Jason S. Feinberg MD
Resident
Department of Internal Medicine
University of California, San Francisco

**Charles R. Kelley MD, MPH
Straub Clinic & Hospital
Department of Occupational Medicine
Assistant Clinical Professor
Department of Medicine
Division Chief, Occupational Medicine
University of Hawaii
John A. Burns School of Medicine

Requests for reprints:
Dr Charles Kelley
Straub Clinic & Hospital
888 South King Street
Honolulu, Hawaii 96813
Phone: (808) 522-4321
Fax: (808) 522-3320

Physical Exertion and Pregnancy

The effects of physical exertion have been studied regarding the reproductive health of pregnant women. Most studies have used preterm birth and low birth weight as endpoints which are common clinical entities in themselves. Unfortunately, many study results are difficult to interpret and apply clinically. Further, when statistically significant associations have been determined, clinical significance is often lacking; for example, What is the clinical significance of preterm birth at 37 weeks of gestation? Results among studies are often conflicting and some actually have shown decreased incidence of adverse pregnancy outcomes among working women. Confounding factors must be considered including recall bias and the socioeconomic differences between working and unemployed women.[4-5]

In a recent case-control study conducted among U.S. nurses with 1,470 cases (210 preterm births defined as <37 weeks of gestation, and 1,260 births delivered at >37 weeks), prolonged standing >4 hours per shift was associated with preterm birth.[6] Other studies also have demonstrated an association of preterm birth, low birth weight, or spontaneous abortion with prolonged standing, lifting, and physical exertion.[7-12] However, not all studies demonstrated these increased risks.[13-14] Potential mechanisms to the above outcomes include decreased venous return with standing, and increased abdominal pressure with lifting and heavy exertion, which may lead to compromise of fetal circulation. While review of the collective data reveals a trend toward these risks, clinical significance remains uncertain.

AMA Guidelines of Physical Activity during Pregnancy[15]

Job Function	Activity allowed: Week of Gestation
Secretarial and light clerical	40
Professional and managerial	40
Sitting and light tasks	
Prolonged (>4hr)	40
Intermittent	40
Standing	
Prolonged (>4hr)	24
Intermittent	
(>30 min/hr)	32
(<30 min/hr)	40
Stooping and bending below knee level	
Repetitive	
(>10 times/hr)	20
Intermittent	
(<10>2 times/hr)	28
(<2 times/hr)	40
Climbing vertical ladders and poles	
Repetitive	
(>4 times/8-hr shift)	20
Intermittent	
(<4 times/8-hr shift)	28
Stairs	
Repetitive	
(>4 times/8-hr shift)	28
Intermittent	
(<4 times/8-hr shift)	40
Lifting	
Repetitive	
>23 kg	20
<23>11 kg	24
<11 kg	40
Intermittent	
>23 kg	30
<14>11 kg	40
<11 kg	40

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Realizing the difficulties of drawing conclusive results from past studies, the American Medical Association, through the Council of Scientific Affairs, has published guidelines for continuation of work during pregnancy.[15] These guidelines assume that the mother is healthy and the pregnancy otherwise uncomplicated. Physicians who counsel pregnant employees should be familiar with these guidelines and keep them in mind when considering work restrictions.

Physicians must accurately define the level of physical exertion encountered at the workplace of each pregnant patient. The level of exertion can be quantified by duration of standing, weight and frequency of lifting, degree of bending, and amount of climbing stairs and ladders. If the employee is unable to provide an accurate description of her activities at work, information may be obtained by speaking directly with the employer and reviewing written job descriptions. In some cases, it may be most appropriate to have an experienced ergonomist evaluate the work situation and provide an accurate and detailed report.

The evaluation of the pregnant worker must be individualized. Physicians should intervene when a pregnant worker's level of activity is excessive. Many workplace modifications usually can be made, especially in the latter stages of pregnancy to enable the pregnant worker to safely continue working. This requires direct communication between physician, employer, and the pregnant worker. Modification can include specialized safety training, lighter duty, reduction in the number of hours worked, and allowing more frequent rest periods. Temporary job reassignment might be an additional option for the pregnant worker.

Summary

Physicians should be aware that continuing work during pregnancy is generally safe in otherwise healthy women. Unnecessary removal of a pregnant worker from employment can result in significant financial loss to the employer, reinforces past misconceptions about the safety of work during pregnancy, and tarnishes the reputation of the medical profession. Levels of physical exertion can be readily determined and also can be modified when necessary to ensure maternal and fetal safety. Frequent rest periods and modified duty in the latter stages of pregnancy should be advocated. The needs and safety of the pregnant worker must remain the foremost concern of both employers and physicians

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Council Highlights

April 12, 1996
Roger Kimura MD, Secretary

The HMA Council was called to order by President Dr Carl Lehman at 5:30 pm.

Present

Officers.—President-elect John Spangler, Secretary R. Kimura, Immediate Past President F. Holschuh; AMA Delegates: C. Kam, R. Stodd; AMA Alternate Delegate: A. Kunimoto; Speaker: H.K.W. Chinn; Vice-Speaker and Honolulu County President: P. Blanchette; Component Society Presidents: E. Bade, Hawaii; T. Smith, W. Hawaii, M. Joshi, Maui; T. Crane, Kauai; Councilors: T. Au, P. Chinn, P. DeMare, M. Shirasu, K. Thorburn, R. Wong, W. Young, J. Betwee, B. Shitamoto, P. Kim, C. Kadooka, A. Bairos; Past Presidents: W. Dang, G. Goto, J. Lumeng, J. McDonnell; Medical Student Delegate: A. Matteo and (medical student guest, James Ing); Young Physician Delegate: C. Goto.

HMA Staff.—J. Asato, N. Jones, B. Kendro, L. Tong, J. Won, A. Rogness, recording secretary.

Minutes.—The minutes of the March 1 meeting were approved as corrected.

Introduction.—Dr Lehman introduced new Council member Dr Chiyome Fukino and medical student guest James Ing.

Dr Lehman reported:

- He had attended a meeting for the Cancer Association's 25th anniversary.
- The Hawaii Health Council meets once a month and is working on the business health-care package.
- On March 6, Drs Brady and DeMare, and HCCME coordinator Cheryl Sugita held an excellent CME workshop.
- On March 29, HMA officers and the Physician of the Year, Dr Ernest Bade of Hilo, went to the Legislature for the signing of the Doctors' Day Proclamation, read on floor of the Senate. They also were recognized in the House of Representatives. A two-page ad for Doctors' Day was placed in the newspaper sponsored by many organizations, including the HMA Alliance.
- On April 5, he presented awards to the Junior and Senior Division students at the Hawaii State Science and Engineering Fair.
- Dr Lehman reported he wrote a letter for the *Pacific Business News* April 8 issue;
- Fund-raising Events
 -The Aloha Medical Mission is having a fund-raising event on July 14, tickets are $100 per person.
 -The University of Hawaii John A. Burns School of Medicine Alpha Omega Alpha Honor Society plans a concert on Saturday, May 4 from 4 to 9 pm at the Bishop Museum.
 -The Distinguished Medical Reporting Awards banquet "Shower of Stars" is set for Saturday, April 13 at the Ilikai Hotel.
- The deadline for resolutions for the AMA is May 17.
- Dr James Lumeng was appointed to the Drug Use Review Board of the Hawaii State Medicaid Program and was elected Chair of the HMA Investigative Committee.

For Action

- Council approved the Executive Committee's motion that the President write an article in the *HMNews* informing members that HMA has no involvement in the "Best Doctors in America" process and that a letter be sent to *Honolulu Magazine* expressing concern about the selection process.
- Council approved the Tobacco Task Force's recommendation to submit a resolution to the AMA in June recommending that physicians cancel their subscriptions to magazines that advertise tobacco products.
- Council approved the Communicable Disease's recommendation that the HMA write to the governor stressing the importance of retaining the Hepatitis B surveillance and vaccination program.

Component Society Reports

Maui.—Dr Joshi reported that in his absence the Maui County secretary handled two or three meetings. There will be a meeting on April 14, with a lecture at the hospital and a cruise to follow.

Kauai.—Dr Crane reported there was a nice Valentine's Day County Society meeting with guests Dr Lehman, Mr Won, and significant others in attendance. There will be a spring meeting in the near future.

West Hawaii.—Dr Smith reported that Drs Lehman, Holschuh, and Don and Mr Won attended their County meeting last month. They discussed current legislation that will affect the Big Island. Dr Don presented information on HPPA. The next meeting will be about the AMA federation organization.

Hawaii.—Dr Bade had no report. Hawaii County is hoping to invite the HMA officers and Mr Won to one of its meetings in the near future.

Honolulu.—No report.

For Information

Credential Verification Service.—The contract with CIVS is being negotiated and is almost completed. HMA will help advertise the service in the near future.

Medicaid Payment Delays.—Delays in reimbursement for the Medicaid fee-for-service and General Assistance programs have caused considerable concern. HMA will meet with DHS to resolve this problem.

Quest.—A physician raised a concern that after caring for a Quest patient he has still not been paid 19 months later. He will write his concern and forward it to Dr A. Don or Dr Holschuh, who serve on the Quest Advisory Board.

Health-care Professional March on Washington.—This march is to oppose managed care and will be held on May 10. Last year 30,000 professionals attended.

Physician Legislator.—Dr Michael Loftus will be running for state Representative in District 47.

Parliamentary Law.—Dr H.K.W. Chinn is interested in teaching a parliamentary law course at the HMA. This will be open to all members. More information at a later date.

Prison System.—Dr Holschuh wrote a letter to the governor in support of Dr Thorburn who has resigned as medical director for the corrections division. The issue of clinical autonomy must continue to be supported by HMA in conformance with nationally recognized standards and ethics. Council applauded Dr Thorburn for her outstanding service as a physician in the community.

PRO.—There has been no announcement regarding the selection of the PRO in Hawaii. Information is expected someime between March 15 and April 30, 1996.

The meeting was adjourned at 7:11 pm.

News and Notes

Life in These Parts

A patriotic KHVH radio caller on the "Black Avenger" Ken Hamblin Show describes "A-M-E-R-I-C-A" as an acronym for "All must echo repeatedly I care for America."

A KHVH radio announcer claims there are 12 million vegetarians in America.

Bumper Sticker: Older model GM car with a message: "Hug your kids at home and belt 'em in the car."

Silent Protest: "We, the willing, led by the unknowing, are doing the impossible for the ungrateful. We have done so much for so long, with so little, we are now qualified to do anything with nothing."

(Note from the bulletin board at the Kam IV Rd Auto License Renewal Station)

Miscellany

What's the difference between ex-cons and congressmen? Every now and then, ex-cons pass a few good bills.

On the evening of her wedding, Diana pulled her mother aside. "Mom," she said, "teach me how to make my new husband happy."

"Well, honey, when two people love each other deeply, making love comes naturally."

"I know how to make love," the daughter interrupted impatiently, "I want to know how to make your chili dogs."

(From Playboy, April 1996)

Three physicians approached the Pearly Gates. St Peter greeted them and asked each: "What have you done to deserve entering heaven?"

The first physician: "I was a cardiologist. I improved the cardiac catheter technique and helped save many more lives."

St Peter: "You are deserving and may enter."

The second physician: "I was a GP in the hills of Kentucky. I doctored several generations of families from birth to death."

St Peter: "You did well. Please enter."

Third physician: "I was an HMO administrator. I devised the most cost- effective measures so that patients could be discharged in three days no matter how sick and save the federal government millions of dollars."

St Peter: "You may enter." As he opened the Pearly Gates, St Peter added, "This gentleman is authorized to stay three days with us."

The 60-year-old man developed symptoms of nocturia, dribbling, frequency and dysuria. He saw a urologist for evaluation and asked the physician to do a two finger rectal examination because his medical plan required a second opinion.

(As told by Cathy Otsuji, our favorite Merck rep)

Surgical Scrubs

An on-site study of 493 doctors at a convention of the Infectious Disease Society of America revealed: the percentage of male physicians who washed their hands after using the rest room, 56%; of female physicians who washed, 87%.

(Also from Playboy)

Bandage Surgery

Surgeon John Payne has pioneered laparoscopic surgery in Hawaii since joining Kaiser in 1990. John presently uses laparoscopic techniques for 60% of his cases (the American Hospital Association predicts 80% of surgery will be done laparoscopically by the turn of the century). He has done laparoscopic surgery for a dozen different procedures including heartburn, perforated duodenal ulcers, colon and rectal cancer, pelvic node dissection for prostate cancer and adrenal, spleen and kidney resection. John is credited with the development of an ultrasonic dissector which is standard equipment for laparoscopic procedures around the world and now is working on the development of a three dimensional camera to provide depth perception. He uses high-definition, high-speed telephone lines with a two-way audiovisual communicator to learn and perfect new techniques. After doing 100 hernia repair cases, John proved that laparoscopoic herniorrhaphy is superior to traditional techniques in terms of recovery and pain.

Diet Pills Duo

A three and a half year study at the University of Rochester (a major center for obesity research) has shown that a morning pill—phentermine (to curb appetite) and an evening pill—fenfluramine (a neurotransmitter which affects the brain's satiety center) works wonders. The Honolulu Medical Group offers an obesity treatment program to those 20% over their optimum body weight using the drugs "Phen/Fen" as part of a behavior modification program which includes nutrition awareness, a low-fat diet, and exercise.

Richard Littenberg says there is an abuse potential, but it appears to be small. The pills are used intermittently: on for a few weeks and off



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Classified Notices

To place a classified notice:

HMA members.—Please send a signed and typewritten ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in *HMJ* as space is available.

Nonmembers.—Please call 536-7702 for a nonmember form. Rates are $1.50 a word with a minimum of 20 words or $30. Not commissionable. Payment must accompany written order.

Don't miss the

Hawaii Heritage Quill and Ink Exhibit

by Ramsay

Recently honored as a "Living Treasure of Hawaii," Ramsay's HMA exhibit features art she has created over the past 20 years.

Position Available

Lahaina, Maui.—B/C/BE FP Well-established multispecialty group. Ambulatory care, minimal call. Position available summer 1996. Send CV to Dr Gilbert, 130 Prison St, Lahaina, HI 96761.

PACE Hawaii.—A comprehensive health care program for the elderly is seeking a physician, (minimum 20 hrs), to join its interdisciplinary team. Experience in geriatric or internal medicine. Please send CV or resume to PACE Director, 1027 Hala Dr, Honolulu, HI 96827; (808) 832-6114.

Services

Professional Practice Enhancement.—Provides assistance with improving cash flow, reducing insurance turnaround time, designing practice brochures and forms, and enhancing staff efficiency. Services designed for established physicians and new physicians opening a practice. Call us at 532-0517.

Office Space

Medical Arts Bldg.—250 sq ft to 997 sq ft office space avail. Pharmacy, x-ray lab; Clinical Laboratories of Hawaii on-site. Call Chrissy Young (S), 524-2666.

Pearl City Business Plaza.—Long leases; 680+ sq ft; 24-hr security; free tenant/customer pkg; available now; call 531-3526 Gifford.

Medical space for rent.—676 sq ft, convenient location in Kaimuki. Phone 732-0441.

Medical Office in Haleiwa.—Ground floor, 1069, 972 and 625 sq ft @ $2.07 sq ft., gross, new AC bldg. Immediate occupancy. Call Ed 637-6239

Medical office available.—Ala Moana Building. Will consider all offers. Call (808) 955-6666.

Office for sale.—Kuakini Medical Plaza, 1078 sq ft; Leasehold condominium, 8 rooms incl. bathroom/shower, built-in cabinets, shelves and work desks. Corner unit w/ panoramic mtn. view. Phone: 536-7809.

For Sale

For Sale.—Exam room table (Ritter Products 100), great condition. $400 or best offer. Call 531-7111 for more information.



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The Weathervane

Russell T. Stodd MD

We have met the enemy and he is—us!

Like lemmings rushing to the sea, doctors in Hawaii appear to be dooming themselves to the same competitive managed care environment that has fragmented many medical communities in mainland America. Fear and greed, those gut reactions to stress, are boiling and roiling in our island medical environment. The March HMA Council meeting revealed that several members of the Council are acting in concert with their individual hospitals to form organizations to capture and retain patients. Dr Andrew Don has been battling for two years to alert private practitioners to this very danger, and that doctors can act together in a statewide IPA without bloodletting. It is not too late to wake up, but the recent Council meeting was sufficient to produce profound angst. It appears shamefully easy for the insurance bullies to manipulate and stampede the timid. Take Nancy's advice and *just say NO to slugs.*

You could throw this HMO in the river and skim ugly for three days.

In what may be a landmark case, a malpractice suit in California carried a dual complaint. Two family practitioners cared for a woman under an HMO contract. She complained of abdominal pain, rectal bleeding and abnormal bowel movements, and died of colon cancer at age 35. Her husband and son brought suit claiming that the doctors were negligent in failing to evaluate and refer the patient in a timely manner, and furthermore added the inflammatory complaint of "breach of fiduciary duty." Attorneys for the plaintiff were able to elicit testimony from the CEO of the HMO that the defendant doctors "lost money" when they referred patients outside the group for a test or consultation. The case drew wide media attention including "60 Minutes." A jury found the defendant doctors liable for malpractice, but the judge dismissed the second complaint, saying "There's no way for the doctors to defend against it." Still, the issue is now becoming more obvious to the public; three jurors said they are getting out of their HMO, and others said they couldn't believe this was how HMOs work. The attorney for the defendants admitted that the issue will not go away and that more lawsuits will accuse doctors of selling out their patients' health for added income.

Half the modern drugs could well be thrown out the window, except that the birds might eat them.

When asking patients what they pay for pharmaceuticals, one is often astounded at the variation, with some patients paying a few dollars, while others pay four or five times as much. There is a reason. Fifteen big drug makers, from Abbott to Zeneca, have agreed to pay $408.9 million to settle (why have an embarrassing jury trial?) a class action lawsuit brought by independent pharmacies. The allegation is that the manufacturers offer big discounts to bulk buyers such as HMOs and pharmaceutical mail order companies. The discounting, which began in the late 1980s, has hurt the retail pharmacy business since they must charge considerably more for the same products. While the settlement may sound generous, it has been opposed by many of the 30,000 pharmacy owners. After the lawyers take their substantial cut (don't you love 'em?), the individual owners will each receive less than $10,000, but the discriminatory pricing produces losses greater than that in a single month. The annual damages are estimated at $30 billion from the companies' alleged discount sales.

Teamwork is essential. It allows you to blame someone else.

An ophthalmologist performed cataract surgery, and his patient developed evidence of a complication over the weekend. Another eye surgeon was on call, and the problem became worse under his care. Ultimately, the eye was enucleated; the patient brought suit against the primary surgeon and was supported by jury decision. He appealed claiming that he was not responsible for actions of his on-call designee. They were not business partners, but shared office space and rotated weekends on call. The appeal was supported, the jury decision reversed, and a new trial ordered.

Crime and punishment—the big thieves and the little ones.

A medical laboratory, Chem-Bio Corp, pleaded no contest to misreading Pap smears of two women, one 41 and the other 29 at the time of death from cervical cancer. Specimens from an HMO Family Health Plan, were sent to the lab and reported as normal by the same technologist. Experts who reviewed the slides said the signs of cancer were obvious. The judge gave the maximum sentence—a $20,000 fine—calling it grossly inadequate. The technologist was paid on a per-slide basis, and records showed she screened several times the recommended number under prevailing guideline.

MD means mainly disgruntled.

California Physician, a publication of the state medical association, published a survey of 1,141 young physicians (under age 40 years), and found nearly one-third said they would choose a different profession if they were starting over. Eighty percent said their patient care decisions have been influenced by reimbursement or capitation issues. While 90% were satisfied with their patient relationships, the primary complaints related to financial insecurity and the manipulation of managed care.

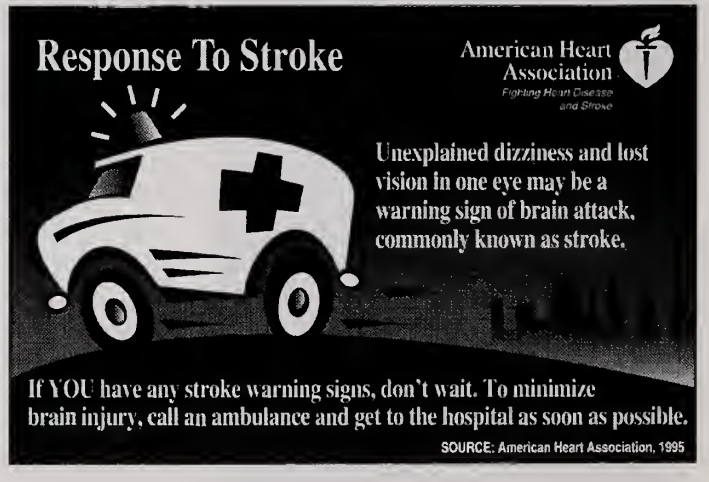
The state is made for man, not man for the state.

New York state has been testing newborns for HIV since 1987. However, in the nonsensical, double-speak world of medical politics, state law requires that such tests be conducted anonymously, and physicians and new mothers are not able to obtain the results of the test! Now, with a few rays of enlightenment infiltrating this absurdity, Governor Pataki has ordered the health commissioner to develop regulations that would require hospitals to ask new mothers whether they wish to be told the results of their babies' tests.

Addenda

- Harris Poll—74% of Americans over age 25 are overweight.
- Latest medical breakthrough—a placebo with side effects.
- The Jews and Arabs should settle their dispute in the true spirit of Christian charity.

Aloha and keep the faith—rts.



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Maui's Kite

Maui the demi-god enjoyed flying kites. A friend of *Maui's* had a special calabash that contained the winds. He would release them at will whenever *Maui* needed them to fly his kite.

Looking forward to reading and enjoying more issues of the *Hawaii Medical Journal*?

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Editorial

Norman Goldstein MD

How to Become the Positively Perfect Physician

The article on page 98 first appeared in *The New Physician* in November 1986, and is reproduced with permission of the author, Catherine Lee, and *The New Physician*. It was appropriate and timely when it first appeared, and remains just as timely.

Catherine Lee is a prolific writer, having served as a reporter-feature writer for the *St Louis Globe-Democrat* and as a health education writer for the Hawaii State Department of Health, the East-West Center, and the John A. Burns School of Medicine.

She has had articles published in *American Way, Modern Maturity, The Rotarian, Learning, Medical Economics*, and other local national publications. During World War II, she served with the American Red Cross in U.S. Hospitals in Australia and New Guinea.

Many thanks, Catherine, for sharing your insights into the Positively Perfect Physician.

Letters to the Editor

Optometrists Threaten Public Safety with Bill

A.A. Smyser's April 2 article, "Letting optometrists write prescriptions," does a great disservice to the public. Smyser condones giving optometrists, who have never gone to medical school, the right to treat nearly every eye disease treatable with drugs by legislative fiat rather than with the necessary education and training.

The public needs to know the truth about this bill since Smyser obviously was not apprised of its contents.

It is not [for] legislation to let nonmedical eye doctors treat itchy eyes and pink eyes with a few over-the-counter drugs. Optometrists want to treat every major eye disease treatable with topically applied eye drugs, for a starter. The "simple" diseases they want to treat include glaucoma, corneal ulcers, iritis, and keratitis. These are major eye diseases.

The drugs they wish to use include every major drug now used by fully trained medical eye specialists, ophthalmologists. In other states with prescriptive authority, optometrists are now heavily lobbying their legislators to allow them to use oral and injectable medications, including narcotics, and to perform laser surgery on patients.

Optometrists have testified that they will not ask to prescribe oral medications or controlled substances this year. But they have indicated that they intend to ask for those privileges in the future. So much for sincerity and goodwill.

Calvin M. Miura, MD, President
Hawaii Ophthalmological Society
(*Honolulu Star-Bulletin*. April 6, 1996:B3)

President's Message

Carl W. Lehman MD

The Need to Live Right, the Right to Die

"Lucky we live Hawaii," most of us would agree. With the honor of having the longest life span in the nation comes the reality of meeting the demands of an aging society. When the baby boomers reach age 65, the impact on health care, housing, transportation, economic and social structures will be enormous. As physicians who see the anguish of patients and loved ones dealing with terminal illness and disabling conditions, we know the importance of documenting instructions for end-of-life decisions.

In Hawaii, living will laws were enacted to assist physicians and families in the decision-making process when the patient is no longer able to communicate his or her choices regarding health care. Much credit can go to Dr Stephen Wallach and Jeffrey Crabtree, Esq, for their efforts in pushing for this 1991 legislation. Included in the thousands of living will booklets distributed by the medical society are living will samples as well as a checklist to specify whether food and water should be continued, withheld, or withdrawn. In 1992, legislation was passed which recognizes the right of an adult to appoint someone to make health care decisions on his or her behalf.

I believe the subject of living wills needs to be raised again: reminding those who didn't get around to signing a document to do so and to bring the issue before our younger physicians who may not be familiar with these laws. As advocates for our patient's well-being, we must discuss living wills with our patients and provide information regarding the importance of signing an advanced directive. Information regarding living wills is available at the HMA office.

Other issues that will affect our aging population are the need for adequate living facilities, long-term care and nursing insurance, streamlining entry into the long-term care system, and the need for maintaining independent living as long as possible are but a few issues currently being discussed at the HMA. The hospice concept also can be extended to well-planned and developed retirement communities and needs further discussion.

We must not confuse the issues of euthanasia and assisted suicide with the right to discontinue treatment. Physicians, who are entrusted with the living wills and directives of their patients, must provide assurance they will abide by these documents or recommend transfer to another physician. We need to keep in mind that patients are often fearful of becoming a burden to family or loved ones, and we must do what we can to relieve their anxiety. If we practice what we preach, we will also express our wishes to families and loved ones and sign a living will or declaration to make certain our colleagues have guidance regarding our personal directives.

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what if I need information on patient benefits?

what if I want to manage my office better?

what if my patient gets sick away from home?

what if I want to transmit claims over my computer?

what if I want to be a part of an HMO?

what if I don't?

what if I want a health care partner that listens?



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Choices for a Healthier Hawaii

How to Become the Positively Perfect Physician

Catherine A. Lee



As a lay editor at a medical school, I listened one day as new physicians held a soul-searching seminar on their professional manner with patients. Self and peer-criticism prevailed; these were young and earnest doctors, with at least near-perfection as their goal.

Unfortunately, they were going about it the wrong way. All they needed to do was read medical history, for therein lies the measuring stick for excellence. Doctors have been judging themselves for more than 2,000 years. The medical profession has set its own standards ever since the first exacting professor lectured to the first anxious student. And that began—in Europe, at least—some 400 years before Christ, when Hippocrates instructed Greek doctors-to-be.

Even before Hippocrates had joined the immortals, doctors in India and China were training apprentices in the healing arts of their culture. Almost from the beginning, professors of pulse and pills established strict criteria for the character, ethics and even appearance of medical practitioners.

Consider India. There, a doctor had to *look* like a doctor. Sanskrit writings of approximately the fifth century specified that a doctor-in-training should have more than just intelligence and a "chaste and benign demeanour." He also should have "thin lips, thin teeth, thin tongue, a straight nose, large, honest, intelligent eyes."

Hippocrates advised practitioners to wear "white, well-scented garments" and have hair and nails cut "not too long, or too short." Furthermore, a doctor should be "as plump as nature intended him to be"—for who would trust a skinny, undernourished medic?

Centuries later, Quaker physician (and signer of the Declaration of Independence) Benjamin Rush found young Yankee doctors lacking in bodily grace. He believed that Americans preparing to study medicine in Europe should spend an hour daily for three months taking dancing lessons.

But being a thin-lipped, sweetly perfumed, pleasingly plump twinkle toes does not a doctor make. Age, too, has always been a valued characteristic. But in any era where young men wear beards, the hirsute route to an aged appearance is useless (and no answer for women). On this topic laymen have offered a few morose comments.

Samuel Johnson, social critic of 18th century London, noted that medical men, "though ever so young, found it necessary to add to their endeavors a grave and solemn deportment." Benjamin Franklin got in his penny's worth of advice: "Beware of the young doctor and the old barber." To which physician-essayist Oliver Wendell Holmes added: "Age lends the graces that are sure to please. Folks want their doctors mouldy, like their cheese."

Ah well, time heals all things. While sages pondered ages, ordinary folks with ailments were asking more fundamental questions: Does the doc make house calls? How long do I have to wait to see him?

Sufferers of old could relax. Medical men who followed their preceptors' rules were instantly available. In seventh century China, physician-philosopher Sun Szumiao wrote a directive predating America's postal service ideals. Paul Unschuld translated in his *Medical Ethics of Imperial China*: "Neither dangerous mountain passes, nor the time of day; neither weather conditions, nor hunger, thirst, nor fatigue should keep [the physician] from helping whole-heartedly."

The land of Confucius also insisted the doctor be prompt, for "otherwise, the entire family of the patient will be in sadness and in fear, and will wait with sighs." In 13th century Italy, the government directed that "a physician shall visit his patient at least twice a day, and at the wish of the patient, once also a night." And in the English countryside of the 1600s, Shakespeare's son-in-law, Dr John Hall, rode horseback 40 miles to see patients.

These prompt, indomitable, bone-weary medicos at least reaped a psychological reward. Patients of the past *appreciated* their doctors. For example, in India it was polite to offer the physician a hot bath after his professional call.

Not only was he prompt, but a doctor trained in the 1200s at Italy's famous Salerno medical school made good use of the time spent reaching a patient. He was taught to ask the messenger who sought him out about the patient's symptoms as they traveled to the bedside. Then, the physician was assured, even if he could not make a diagnosis "after examining the pulse and urine," his surprising knowledge of the patient's complaints was sure to win the sufferer's confidence.

These warm-hearted Italian doctors knew all about the Bedside Manner. This began the moment one entered the house, when "the doctor should not appear haughty but should greet with a kindly, modest demeanour those present," according to historical accounts. He should then praise "the beauty of the neighborhood, the situation of the house, and the well-known generosity of the family, if this seems suitable."

However, in ancient China surveying the surroundings was considered crass, for patients were not to be judged by status and wealth. *Professional Admonitions*, translated by Paul Unschuld, stated: "Whenever beautiful silks and fabrics fill the eye, the physician is not allowed to look at them where...liquors are placed...he will look at them as if they did not exist."

Hippocrates had, of course, addressed that important first encounter between the sick and the healer. He advised medical men to "say something agreeable to the patient, flatter his sense,

➤ *Continued on Next Page*

and humor his fancies, if they are not dangerous."

Unfortunately, doctor-patient rapport has always carried with it a certain danger, especially if one is female and the other male. Threats to a male doctor's professional reputation often appeared in female form; both Asia and Europe learned to have a chaperone in a lady's sickroom.

However, near the 13th century the Chinese apparently relaxed the requirement. It was then that one Nieh Tsung-Chi discovered the perils of the boudoir. On two occasions, a woman whose husband was conveniently out of town sent for Nieh and tried to seduce him, offering him "my body in my bedroom." Twice, the physician—as straight as they come—"struggled free and ran away." Later, professional virtue brought its reward, via the supernatural route. Pleased and approving, the gods extended Nieh's life span from his ordained 60 to a ripe 72 years.

As for actual patient care, some recognition of humanistic medicine appeared many centuries ago. Writings on medical education in sixth century Spain stated: "The doctor should know something of music, for many things may be done for the sick with this art." In France, a 1306 treatise enlarged the scope of morale building. Doctors were told to raise the patient's spirits with music or "by forging letters telling him of the death of his enemies."

But suppose the patient—cheered, entertained, purged, pilled and pulsed—still is not getting any better. How does the good doctor handle this, er, grave matter?

In the City of Brotherly Love, Dr Rush suggested using "pious words when medicine fails." Italy's Salerno faculty taught doctors to tell the patient he would recover and warn the relatives that he was very ill. If he died, the relatives said the wise physician foresaw this, but if the patient recovered, the physician's fame was spread.

As to reimbursement, a crude sliding-fee scale was developed in ancient India, where physicians were advised to "treat gratuitously Brahmans, teachers, the poor, friends, neighbors, the pious, and orphans." Considering that the Hindu doctor studied for six years, one hopes he wasn't in debt for his medical education. In the golden days of Greece, Hippocrates told his followers: "Sometimes give your service for nothing, for where there is love of the art (medicine), there is also love of man."

Yet, doctors must eat and pay off the mortgage, so compromises were necessary. Early practitioners saw the value of charging fees. It took a pragmatic 14th century Frenchman to point out that you can't judge a book by the cover, for "wealthy people, when they go to see the surgeon, dress in poor clothing." A Salerno professor, observing flawed human nature, concluded that some charge must be made. He advised:

"Don't give your service gratis. Let not the wise muse of Hippocrates serve the sick in bed without reward, for medicine bought dearly benefits much; If something is given for nothing, no good results."

While the details of medical history, separated by country, class and century, are amusing, the essence of early medical precepts is not. Idealism seldom is, and the medical leaders of old were idealist. Indeed, they often functioned as judges of colleagues who failed to measure up. They censured the lazy ones of 17th century England who, gossiping in coffee houses, wrote prescriptions without seeing their patients. They frowned on medieval dandies throughout Europe who were conspicuous in "bright ribands, velvet bonnets, and embroidered gloves."

Long ago, medicine's standard bearers addressed the problem of advertising to build a practice. In the very beginnings of medicine in India, it was quite all right for a physician to walk through the streets saying, "Who is ill here? Whom shall I cure?" But early conservatives in Greece were embarrassed by fellow doctors who demonstrated their skills in open street stalls. Down through the centuries, Chinese physicians registered shame at colleagues who boasted of their ability and who used bold and conspicuous calligraphy on their name plaques.

Both practitioners and the public in 19th century Europe snickered at doctors who, summoned publicly from church, "went galloping throughout the town" to give an impression of a busy practice. In the American Colonies, disapproval greeted the man who, as the stagecoach approached, climbed on top of a huge rock, shouting, "I am a physician and surgeon."

These later critics followed a good and ancient example. More than 1800 years earlier, the famed anatomist-teacher Galen had heaped scorn upon doctors who used dubious methods to gain faithful patients. The methods ranged from flattery to the ultimate bit of unprofessional pleasantry—telling patients dirty jokes.

Perhaps medicine's bad boys merely illustrate a truth: Sin becomes conspicuous where virtue prevails. Even a light-hearted look at medical history reveals an insistence on professional probity. The ethical codes of East and West are remarkably similar. Both Indian and Chinese rules of conduct agreed with the Hippocratic Oath on holding doctor-patient communication sacred.

Doctors also were pledged to observe the equality of illness. "The physician should not pay attention to status, wealth, or age; neither should he question whether the person is attractive or unattractive, enemy or friend, uneducated or educated," read Chinese admonitions. In Italy of the 1500s, medical students were taught to approach the poor and low-born patient "as if he were a nobleman, since he differs in no respect from the latter, except by fortune."

Personal virtue and humanity equally were stressed. The physician in India was urged to be "chaste and abstemious...kind...speak the truth." The Chinese doctor must "above all have a marked attitude of compassion." In Greece, "he must be a gentleman in his character, and being this, he must be grave and kind to all."

All the essential criteria of character and ethics were outlined long ago. Any new physician can rate himself or herself against the requirements of medical history: Are you a person of benign demeanor; not too young? Are you prompt, sober, modest, and amenable to house calls? Are you well-barbered, neatly manicured, nicely plump, but thin-lipped? Musically knowledgeable? Nimble of foot? White of coat and sweet of smell?

Now look in the mirror.

Look carefully. Do you also have large, dark, intelligent eyes?

If so, then relax and rejoice. You are the positively perfect physician!

Reprinted from *The New Physician*, Reston, Virginia

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PPD Skin Reactivity and Anergy in HIV-Infected Patients in Hawaii

Cecilia M. Shikuma MD, Susan Congdon RN, Nancy Hanks RN, Scott Souza PharmD, Amy Kindrick MD, MPH*, Steven Case MS, and Margo Heath-Chiozzi MD

This study was a prospective screening study for PPD and anergy skin test reactivity in 304 HIV-positive individuals. A PPD positivity rate of 4.1% and an anergy rate of 50.5% were observed. The Hawaii HIV population has a relatively low prevalence of latent TB compared with the high prevalence of TB in the Hawaii population at large.

Introduction

Tuberculosis is a major cause of morbidity and mortality in HIV-infected individuals and constitutes an AIDS-defining opportunistic infection under CDC's Revised Classification System for HIV Infection.[1] The risk of progression from latent to active disease for a person co-infected with TB/HIV is estimated to be 7% to 10% annually as compared to a 10% lifetime risk in HIV-seronegative individuals.[2]

Among the opportunistic infections affecting HIV-infected individuals, tuberculosis is unique in that it is usually preventable and curable if detected early. Diagnosis of latent infection, however, may be difficult, as a high degree of anergy has been reported in the HIV-infected population, reducing the sensitivity of the tuberculin skin test.[3-5]

The CDC in April 1991 made several recommendations for the diagnosis of latent TB infection in HIV-infected individuals.[6] Specifically, recommendations called for companion testing with two delayed-type hypersensitivity (DTH) test antigens in association with the standard Mantoux method PPD tuberculin (5 TU) testing. A PPD cut off of ≥5 mm in this population was recommended as evidence of tuberculosis infection.

According to the CDC, in 1994 Hawaii had the highest TB case rate in the nation with 20.9 cases/100,000 individuals.[7] Little is known, however, about the rate of PPD reactivity in the HIV-infected population in Hawaii.

The aims of this study were to determine the rate of PPD reactivity in the HIV-infected community in Hawaii, to correlate the utility of PPD in this HIV population with a suspected high degree of anergy, and to correlate PPD and anergy result with immune status of these individuals as measured by peripheral blood absolute CD4 and CD8 lymphocyte subset determinations.

Materials and Methods

This study was a three year, prospective, single-center screening study for PPD and anergy skin test reactivity. HIV-infected persons age ≥12 years were recruited through AIDS service organizations and primary health-care providers for voluntary PPD and anergy skin testing. Participants were recruited from all major islands in the state. Demographic data including age, place of birth, ethnicity, HIV risk factors, history of previous PPD, and history of BCG vaccination were obtained for each participant. Three hundred individuals were targeted. Those with a history of sensitivity or intolerance to screening agents, history of previous positive PPD or history of tuberculosis were excluded.

The antigens and concentrations used to determine DTH were as follows: Tuberculin purified protein derivative (PPD) (Connaught Laboratories, Ltd, Willowdale, Ontario, Canada), 5 tuberculin units (TU) per 0.1 mL; mumps skin test antigen (MSTA) (Connaught Laboratories, Ltd, Willowdale, Ontario, Canada), 4 colony-forming units (CFU) per 0.1 mL; and tetanus toxoid fluid (Wyeth Laboratories, Inc, Marietta, Pennsylvania). The tetanus toxoid antigen was prepared by adding 0.2 ml of fluid tetanus toxoid to 1.8 ml of sterile albumin saline with phenol (Hollister Stier/Miles, Spokane, Washington), to provide a 1:10 dilution containing 0.1 LFU per 0.1 mL. Sterile albumin saline contains 0.9% sodium chloride, 0.03% albumin (human), and 0.4% phenol in water for injection. The skin tests were applied to the volar aspect of the right forearm using standard Mantoux technique. Skin tests were read once between 48 to 72 hours post-skin-test placement by trained personnel. The largest transverse diameter of palpable induration at each site was measured and recorded. A positive response was defined as ≥5 mm of induration in response to PPD and any induration in response to mumps or tetanus. Anergy was defined as negative response to all three antigens. Those individuals with less than 5 mm of induration to PPD underwent retesting with all three antigens.

Blood was drawn for T-lymphocyte subset analyses by flow cytometry within three months of skin testing. Patients with positive PPD and patients with anergy underwent medical evaluation by study personnel and chest x-ray examination for evidence of active tuberculosis. Those with positive PPD were referred for additional evaluation and treatment. They were offered enrollment into AIDS Clinical Trials Group 177 TB Prophylaxis study or referred to their primary physician or the Hawaii Department of Health.

Analysis of data to determine any significant differences or associations between variables was done using the chi-squared test of association with continuity correction and Fisher's exact test.

*Hawaii AIDS Clinical Research Program
University of Hawaii
3675 Kilauea Avenue
Honolulu, Hawaii 96816
This study is supported by the
Research Centers for Minority Institutions Grant No. RR 03061.

Results

A total of 304 individuals were enrolled in the study between January 1993 and March 1995 (Table 1). Complete results of skin test reactivity were available for 293 individuals. Results of T-lymphocyte subset data were available for 286 individuals. Not one case of active tuberculosis was identified.

A total of 133 individuals or 45.4% of all participants showed true negative PPD results (PPD negative, mumps and/or tetanus positive). A positive delayed-type hypersensitivity (DTH) response was observed most frequently with tetanus antigen (38.6%) followed closely by mumps antigen (36.2%). A positive reaction for both mumps and tetanus was seen in 25.9%. A total of 148 individuals showed no reaction to any of the three antigens, demonstrating an overall 50.5% rate of anergy (Table 2).

Some induration to PPD antigen was observed at 48 to 72 hours in 15 individuals (5.1%). Ten individuals had induration of ≥5 mm, meeting the CDC's criteria for a positive PPD in HIV-infected individuals.[6] The five individuals with less than 5 mm induration underwent repeat skin tests for all three antigens. One of these five individuals had an initial induration of 4 mm to tuberculin antigen and negative reaction to mumps and tetanus. Repeat tuberculin testing one month later revealed a 9 mm induration. Mumps and tetanus remained negative. He was counted as a PPD reactor. The remaining four individuals who were retested had a < 5 mm reaction or were nonreactive to PPD. Another individual initially showed no induration to tuberculin antigen at 48 hours but showed a delayed response to PPD 7 days later. He also was counted as a PPD reactor. Overall, a positive PPD was found for a total of 12 patients or 4.1% of the study cohort. None of these individuals reported a history of BCG vaccination.

Two of the 12 participants with positive PPD had negative reactions to mumps and tetanus. Seven had positive reactions to both mumps and tetanus. Two had a positive reaction to tetanus alone and one had a reaction to mumps alone.

A CD4 count less than 200/mm^3 was shown to be significantly associated with an anergic state as compared to a CD4 count greater than 200/mm^3 ($p < 0.05$). An inverse relationship of CD4 counts and anergy was seen (Fig 1).

Table 1.—Demographics

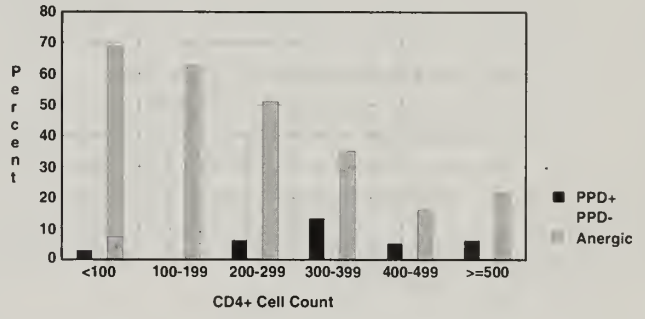
	No Patients (% total)
Patients entered	304
Age (Mean/Std dev)	40.5/8.0
Race	
African-American	6 (2.0)
Asian Pacific Islander	69 (22.8)
Caucasian	192 (63.4)
Latin/Hispanic/Portuguese	27(8.6)
Native American	10 (3.3)
Place of Birth	
Mainland	176 (57.9)
Hawaii	62 (20.4)
Foreign country	16(5.3)
Not given	50 16.4
Risk Behavior	
Bisexual	5 (1.6)
Blood transfusion	6 (2.0)
Heterosexual sex	19 (6.3)
Homosexual	222 (73.0)
Intravenous drug user	15 (4.9)
Sex with intravenous drug user or bisexual	3 (1.0)
CD444 count*	
≤50	72 (23.7)
51-199	65 (21.4)
200-499	100 (32.9)
≥500	49 (16.1)

*Available for 286/304 pts

Table 2.—Skin Test Results

	PPD	Anergy Panel (one or both)	N (%)
Positive PPD	+	+	10(3.4)
	+	-	2(0.7)
True Neg PPD	-	+	133(45.4)
Anergic	-	-	148(50.5)
	Total		293 (100)

Fig 1.—Frequency of antigen response according to CD4 T-Lymphocyte



Of the 12 individuals with positive PPD skin tests, four had CD4 counts of 200/mm^3 to 299/mm^3, three had CD4 of 300 cells/mm^3 to 399 cells/mm^3, one had CD4 of 400 cells/mm^3 to 499 cells/mm^3, and three had CD4 of ≥500 cells/mm^3. Only one individual had a CD4 count of less than 200 cells/mm^3. This individual had a CD4 count of <6 cells/mm^3, and was the individual previously described with a initial 4 mm reaction to tuberculin increasing subsequently to 9 mm on boosting. A significant association was found between having a CD4 count greater than 200/mm^3 and a positive PPD ($p=0.004$).

An interesting phenomenon of delayed skin-test positivity was observed in five patients. The original case involved a 36-year-old HIV-positive Caucasian man from Maui who was seen in September 1994. No induration was noted at the site of his PPD at 48 hours post-skin-test placement. He did have a 13 mm reaction to tetanus and a 4 mm reaction to mumps. The patient phoned our research office with information that he had noted a swelling in the region of his PPD seven days post placement of the skin tests. The positive reaction was confirmed and read as a 7 mm induration by the local HIV care coordinator nurse who is certified in tuberculosis testing. Unfortunately, no repeat PPD was done and the patient later died of non-TB-related causes.

All patients subsequent to this case were asked to call if indurations developed after the initial 48 to 72 hour reading. No other delayed reaction to PPD was reported. However, calls were received from four participants describing delayed reactions to tetanus and/or mumps from five to ten days post placement of the skin

tests. Two of these individuals underwent repeat skin testing. One of these individuals was initially anergic but reported a reaction to tetanus antigen at day eight. He underwent repeat skin tests two months later and had a positive tetanus reaction of 3 mm. No reaction was observed to mumps or tuberculin. The second individual, also initially anergic, reported a positive reaction to mumps and tetanus at day ten. He was retested four months later and had a 3 mm reaction to tetanus, and negative reactions to mumps and PPD.

Discussion

Hawaii has the highest tuberculosis case rate in the nation with 20.9 cases/100,000 individuals.[7] According to Richard Vogt MD of the Hawaii Department of Health in September 1995, of the 247 cases of active TB reported to the Hawaii Department of Health in 1994, 224 (91%) were Asian/Pacific Islanders and only 20 (8%) were listed as Caucasians. One hundred ninety five patients (79%) were foreign-born individuals with 127 patients born in the Philippines, 17 in Southeast Asia, and 11 from Korea. Tuberculosis in Hawaii is a problem largely of the immigrant population especially of Asian/Pacific Islander ancestry and not of the larger local population.

This study found a PPD reactivity rate of 4.1% among Hawaii's HIV-infected population, a rate much lower than expected given the high overall case rate in the state. Our study cohort consisted of 63.4% Caucasians and 22.8% Asian/Pacific Islanders, an ethnic composition closely matching the ethnic distribution of AIDS cases reported to the Hawaii Department of Health (66% Caucasians and 25% Asian/Pacific Islanders),[9] but very different from the ethnic distribution of persons with active TB in the state. Thus the HIV population in Hawaii appears to have a relatively low prevalence of latent TB and is a population probably distinct from the immigrant Asian/Pacific Islander population responsible for the high prevalence of tuberculosis in Hawaii.

An overall 50.5% anergy rate was found in our study. A strong inverse association between the lack of response to DTH testing and degree of immunosuppression as represented by CD4 counts was demonstrated. The rate of anergy varied from 22% in individuals with CD4 counts ≥500/mm^3 to 72% in those individuals with a CD4 count of <50/mm^3. This high rate of anergy and inverse correlation with CD4 counts are consistent with other published reports.[3-5,10] Huebner et al studied a total of 479 HIV-infected persons at an HIV clinic in Florida and a tuberculosis clinic in New Jersey and found that anergy was four times and 15 times as likely for persons with CD4 T-lymphocyte counts of 200/mm^3 to 400/mm^3 and <200/mm^3, respectively, as for persons with >499 CD4 T-lymphocytes/mm^3.[4] Similarly, Graham et al reported an inverse linear trend for PPD positivity and CD4 lymphocyte count in a cohort of 260 individuals with history of intravenous drug use in Baltimore.[10] Brix et al reported a 5% anergy rate in HIV-infected individuals with CD4 counts >500/mm^3 while among individuals with ≤200 cells/mm^3 the anergy rate increased to 38%.[3]

Individuals with a positive reaction to PPD were likely to have a positive reaction to anergy testing. Ten of the 12 participants with positive PPD had a positive reaction to DTH antigens. This result is in contrast to the finding of Markowitz et al who reported no association between the response to control antigens and tuberculin reactivity.[5] Furthermore the ability to mount a positive reaction to PPD appears heavily dependent on the CD4 count of these individuals. Eleven of 12 participants in our study (92%) with a positive PPD had CD4 counts ≥200. Only one individual with a positive PPD was detected in the cohort with CD4 counts <200 despite the fact that close to 50% of the entire cohort had CD4 counts less than 200.

DTH testing is recommended by the 1991 CDC guidelines as an adjunct to tuberculosis skin testing in the diagnosis of tuberculosis.[6] The value of anergy testing, however, has been questioned lately especially in view of the recent study demonstrating fluctuation of DTH reaction over time in many HIV-infected individuals. An anergy study in a cohort of 923 injection drug users at methadone clinics in Baltimore between 1991 and 1994 demonstrated an initial anergy rate in HIV-seropositive individuals of 36% and in HIV-seronegative individuals of 14%. Among those who initially were DTH-positive, anergy developed in 24% of seropositive and 15% of seronegatives at the next study visit. Among those who initially were anergic, changes to a positive test took place in 15% of seropositive and 11% of seronegatives.[11] Our study supports the view that DTH testing is imprecise. Neither low CD4 counts nor anergy to DTH testing is completely predictive of a negative PPD as demonstrated by our two patients with negative responses to DTH who nevertheless had a positive reaction to PPD. One of these individuals had a CD4 count of <6. Our results argue that PPD skin testing should be considered in all HIV-infected individuals regardless of their state of anergy or CD4 count.

Recent studies have shown some, although limited, utility in boosting for those patients with insignificant (<5 mm) PPD and anergy. Huebner et al[6] found seven individuals from a cohort of 130 patients with initially negative PPD tests who responded to boosting. Webster et al[12] found 18 patients in a cohort of 709 HIV-infected patients who demonstrated a booster effect. These boosted responses were seen in 8 (2.1%) anergic patients, 6 (4.5%) nonanergic patients and 4 (2.5%) with anergy status unknown. In our study, five participants with <5 mm reaction to tuberculin antigen underwent skin testing for the second time. One individual was found to have a 9 mm response to the second PPD. Although numbers were limited in this study, boosting by repeat PPD may be of value in those with minimal induration (<5 mm) to tuberculin antigen.

A possible delayed reaction to PPD and anergy testing was observed in this study, with positive reactions developing after the standard 48 to 72 hours after placement of the skin tests. In one instance, 7 mm induration developed at the site of the original PPD seven days after placement. Unfortunately, no biopsies were performed to demonstrate a delayed hypersensitivity reaction. Subsequently, the two other participants self-reported delayed positive reaction to DTH. On retesting, both showed positive reactions to DTH antigen. We believe this phenomena should be studied further and that there may be utility in instructing patients to return if a delayed response is noted in order to confirm a positive reaction.

In conclusion, our study demonstrates that the HIV population in Hawaii has a relatively low prevalence of latent TB compared with the high prevalence of TB in the immigrant Hawaii population. Despite relatively advanced immunosuppression, PPD skin testing identified patients for TB prophylaxis. Skin test anergy was inversely associated with CD4 counts although no level of immunosuppression could be identified that could reliably predict skin test anergy. A phenomenon of delayed reaction to skin testing was observed and merits further study.

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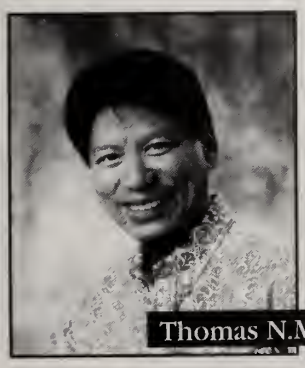
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News and Notes Henry N. Yokoyama MD

Life in These Parts

Lean Years Ahead

Hawaii Health Director **Lawrence Miike** reported in January that the Health Department will have to make do with $24 million less for fiscal year 1996. State Human Services Director **Susan Chandler** reported that her department will have $16 million less. The Aid to Families with Dependent Children program, which costs $12 million a month, will be cut by the federal government.

International Heart Program

Dick Mamiya, internationally known cardiac surgeon, retired from active practice after 31 years and will promote a Queen's Medical Center-sponsored heart program. In the past, Dick has treated more than 300 foreign patients. Income from bypass surgery on international patients currently runs $79 million per year (including housing costs for family members). Tim Yee, Chief Executive Officer for the Queen's International Corp, says patients from the Asia-Pacific region will keep Queen's Hospital beds filled. This market will bring new money to Honolulu, will have a multiplier effect, and will create new jobs.

Dialing for Flowers

Local plastic surgeon, **Dr Bob Flowers** is known for his *lifts*. He and his wife Susan got a lift of their own. Between their home and office, the two fielded eight requests for Valentine's Day roses. Typical questions: "Do you deliver? Do you do weddings? and Do you accept credit cards?" Dialing for Flowers may not get you a bouquet, but may give you a lift.

(From Hawaii—Dave Donnelly Honolulu Star-Bulletin)

Letter to the Editor (In brief)

John Corboy wrote: "We continue to be assaulted by examples of thoughtless waste in ill-conceived government programs. It seems everything the state touches results in waste and mismanagement. The Health Quest program is an excellent example of the "spend first, plan later" mentality. As the program approaches bankruptcy from overutilization, it was decided to apply a means test for participants. This revealed that 40,000 persons are not even eligible. The waste of Quest runs $28 million per year. The only solution is to cut state spending by 20% per year until we return to accountable, bare bones government."

(Honolulu Star-Bulletin, February 16, 1996)

Kailua psychiatrist **Mark Stitham** writes: "Hawaii is one of only two states (the other is New Mexico) that levies a tax on medical services. The general excise tax on prescription drugs was eliminated a few years back. Hawaii should complete the process and follow the majority of other states in eliminating the "sick tax."

(Honolulu Advertiser, January 28, 1996)

News in Brief

The $30 million, 50 bed North Hawaii Community Hospital (funded with half state and half private funds) becomes operational in April. It has surgical and OB units and will offer critical care for accident victims and a variety of outpatient services for Waimea, Kohala, and the Hamakua coast.

The 26-bed Kahuku Hospital suspended maternity services in January for financial reasons. FP-obstetrician James Lew, who has worked under contract for two years, was notified that his contract will not be renewed. Jim delivered 120 babies last year and has about 80 patients at any one time. Kahuku Hospital has decided that it couldn't keep a maternity ward open and maintain other patient services.

In February, Renal Treatment Centers–Hawaii Inc (a subsidiary of Berwyn, Pa-based Renal Treatment Centers, Inc) announced plans to acquire Intercontinental Medical Services, Inc and its four centers for $24 million in stocks.

In January, Intercontinental treated 445 patients (about 38% of all cases in the state. Treatment of chronic renal failure is a $6 billion industry nationally with 2,500 facilities in the U.S. Medicare and Medicaid cover 70% of the patient cost.

Potpourri

A man ordered four expensive 30-year-old single malts and had the bartender line them up in front of him. Then, without pausing, he downed each one.

"Whew," the barkeep remarked, "You seem to be in a hurry."

"You would be, too, if you had what I have."

"What do you have?" the bartender sympathetically asked.

"Fifty cents."

(From Playboy Party Jokes, December 1995)

Overheard in a brokerage:

"I worry about economists who are so young that they think the Great Depression was ended by Prozac."

(The American Legion Magazine)

Jesus returns to Earth and goes into an ER and starts healing people.

The first guy is blind and Jesus heals him. Next is a deaf woman; he heals her. The next guy starts backing away and yells, "Stay away from me! I'm on Workers' Comp!"

(From Stitches, Nov-Dec, 1995)



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Position Wanted

Board Certified OB-GYN.—Physician seeking an OB-Gyn or general practice position in Hawaii. Needs malpractice insurance coverage (occurrence coverage). Salaried position or independent contractor. Contact Jan at Hawaii Medical Association, (808) 536-7702.

Locum Tenens

Locum Tenens.—For family practice, no OB or PEDS. GP, FP, IM are OK. Location Hilo, for two weeks, mid to end of July. Compensation negotiable. Contact Richard Lee-Ching MD, 780 Laukapu St, Hilo, (808) 961-6922.

Office Space

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The Weathervane

Win without boasting. Lose without excuse.

After a two-day hearing in U.S. District Court in Burlington, Vermont, Judge William Sessions, III, entered a consent order invalidating all claims at issue in Dr Samuel Pallin's patent infringement claim against ophthalmologist, Jack A. Singer MD. As ASCRS President Charles Kelman MD, stated, "This was the right legal result and the right result for society." Yes, society won, but in truth, the whole legal exercise was absurd from the onset, and the only real winners were the attorneys. No doubt they headed for the bank while laughing at these foolish doctors. Although some might say it is unfair, hereafter the name of Samuel Pallin MD will always be recalled as a symbol of arrogant cupidity. Sad to relate, although the AMA has declared such procedure patents unethical, several others have been issued in recent years.

You must decide whether to be the bird or the statue.

In Utah, a research team set out to establish the cost savings of a limited drug formulary used by six HMOs, including 13,000 patient studies. No practicing doctor would be shocked, but the research team was surprised when they found that a limited formulary actually increased the cost of pharmaceuticals to the HMOs when compared to an open formulary. Example—ineffective brand X had to be used because the doctor wasn't allowed to prescribe the more expensive brand A. Too often, the patient was obliged to make extra visits to the doctor, the pharmacy ultimately had to use the more expensive drug, plus the doctor lost clinical time while begging for permission to used appropriate medication. This HMO study demonstrated another example of why bean counters should not manage the practice of medicine.

I learned a lot from him by doing the opposite.

A plastic surgeon performed a blepharoplasty without apparent complications. The patient was unable to close her eyes after the surgery, and one week later was referred to an ophthalmologist who prescribed lubricating ointment. When a diagnosis of lagophthalmos was made, she brought a malpractice suit against the surgeon and a jury awarded her $540,000. However, the decision was reversed by the appelate court because the patient sought damages for "mental anguish." Therefore, the court ruled that the surgeon should have been allowed to depose the patient's psychiatrist and introduce this evidence at trial. He did not shrink from his duty.

The media: Remember, these people are not your friends!

Not fair! The Honolulu newspapers ran a story about the Hawaii Board of Medical Examiner's failure to punish errant doctors, suggesting that the Board was remiss and should get busy and crack down on black-hat physicians. However, the BME has no investigative arm (as do many other states), but must depend on referrals from RICO, the Regulated Industries Complaints Office, a branch of the Department of Consumer Affairs. It is RICO that investigates grievances, and RICO sends appropriate cases to the BME. Incidentally, any complaint made to the Hawaii Medical Association against a physician will be evaluated for reply only if the doctor is an HMA member (a big time member benefit). Actions against nonmembers must be sent directly to RICO.

Assuredly, this is dull stuff, but vital.

Computer-generated problems are an increasing medical expense. In 1993, more than 41,000 workers suffered from carpal tunnel syndrome requiring time off from work, and costing insurers $50 million in claims. At least 20% (and probably more) of these came from typing. The areas of complaint are the eyes, wrists, shoulders, and neck. Ergonomic medical experts recommend the following: (1) to avoid eyestrain, place the computer screen 26 inches from the eye, center it four inches below the eye and, if glasses are necessary, use a full lens not a multifocal. (2) Do not use wrist rests or splints which put pressure on nerves and can lead to muscle atrophy. (3) The keyboard should slope 12 degrees away from the typist with the back lower than the front, and should be situated one to two inches above the legs. This allows for better hand position, reduces shoulder shrugging, neck tension, and elbow problems. (4) Keep the mouse platform 20% higher than the elbow, in front (not to the side) of the body, and do not squeeze the mouse.

A doctor feels about lawyers like a fire hydrant feels about dogs.

A major shift has occurred in malpractice complaints in recent years with fewer and less-expensive surgical cases and an increasing number of *failure to diagnose* cases. In 1990, failure or delay in diagnosis amounted to 19% of cases, but by 1994 the number jumped to 43% and accounted for 40% of all indemnity. By contrast, surgical liability cases dropped from 19% to 11% and amounted to only 4% of total indemnity in 1994. Surgeons are increasingly scrutinized by quality review and pre-authorization, but meanwhile, managed care plans have restricted diagnostic tests, forced busier schedules, and caused physicians to see patients whose medical history is not well-known to them. Thus, gatekeepers (GPs and internists) have become larger and more vulnerable targets as trial lawyers relentlessly probe for deep pockets.

An economy breathes through its tax loopholes.

If you are worried (who isn't?) about an IRS audit, the worst town to live in is Las Vegas with an audit percentage of 2.92%. Contrarily, Milwaukee is the least likely with a rate of 0.32%. Of course, other factors enter such as income over 100K, self-employed, and corporations with assets over $1 million. Still, stay optimistic, the odds are 99 of 100, that you will not be visited by the IRS.

Addenda

- Annual routine maintenance for the excimer laser is $40,000 to $70,000.
- If it's called tourist season, why can't we shoot them?
- California Association of Consumer Advocates is the new name for the trial lawyers club. What a lovely new acronym—CACA.

Aloha and keep the faith—rts.


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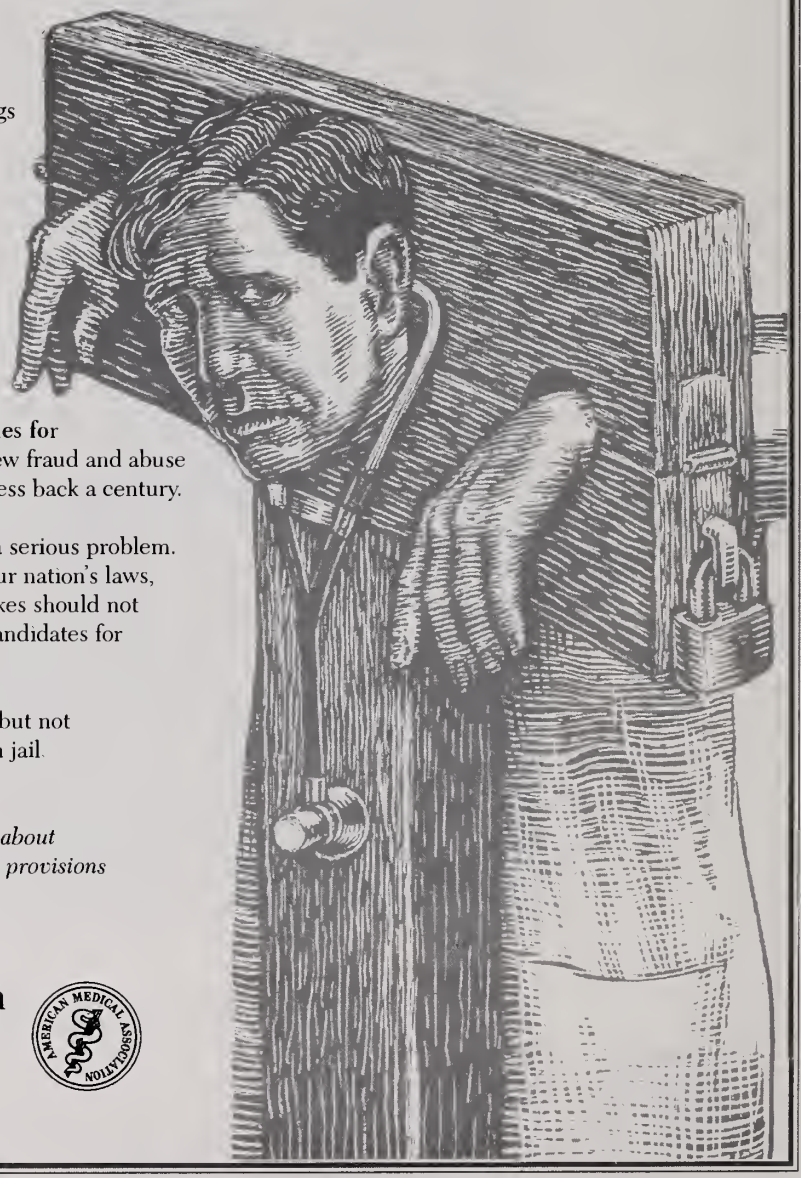
America needs health insurance reform. But unfair fraud and abuse laws need a second opinion.

Congress is moving now to pass long-needed legislation making health insurance portable and ending coverage exclusions due to preexisting medical conditions.

Congress is also considering ways to end the discrimination in health care by providing a greater range of treatment choices for patients through Medical Savings Accounts and enhanced coverage of mental illness.

The nation—and our patients— need these reforms.

HOWEVER...some proposals in the House and Senate go too far. Despite months of negotiations, **legislation is now being considered that could put your doctor in jail or exact grossly excessive fines for unintended paperwork mistakes.** These new fraud and abuse laws would set basic principles of due process back a century.



Medicine agrees that fraud and abuse is a serious problem. If doctors willfully and knowingly violate our nation's laws, they should be punished. But honest mistakes should not make physicians—or any other citizens—candidates for incarceration.

America needs health insurance reform...but not unfair laws that will put innocent doctors in jail.

Call the AMA's Grassroots Hotline at 1-800-833-6354 to obtain more information about joining the campaign to strike these onerous provisions from the law.

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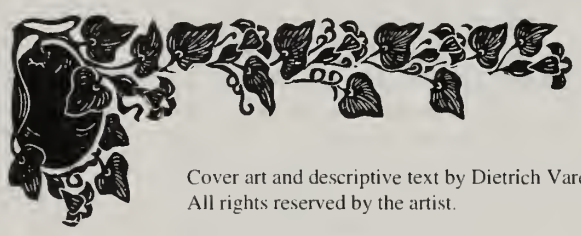
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Maui the Fisherman

The demi-god *Maui* is said to have fished the Hawaiian islands out of the sea. He baited his magic hook with the mud hen or gallinule. Once the islands were out of the sea *Maui* tossed his hook up into the sky where it remains to this day as the constellation Scorpio.



Welcome Wagon Volunteers Needed

The HMA Membership section has implemented a program to call on new physician members to welcome them into the medical society. If you can volunteer an hour or two a month to accompany a staff member to the new physician's office, please call HMA at 536-7702.

Editorial

Norman Goldstein MD

Our Lean Issues

Despite the very lean recent issues of the *Journal,* we have many excellent manuscripts *in the hopper* just waiting for publication.

The problem: Insufficient ad revenue to pay for the pages of manuscripts.

The solution: We need your help. We are planning a *Physician Referral ad page* to help our bottom line.

And ask the next few detail men (or women) who come to your office or who exhibit at your hospital to take an ad in the *Journal.* Full page ads are, of course, desirable, but even half or quarter page ads on a regularly monthly basis would be very helpful.

Call Carol or Becky at the Journal office at 536-7702, Fax 528-2376 or Lori Arizumi 988-6478, Fax 988-2785 for ad info. We need your help!

Letters to the Editor

Brochures on "Successful Strategies For Surviving Managed Care," the uniformed-like-an-Admiral J. Edward Koop's seminar on how to hold on to patients, seminars on how to cope with federal guidelines, how to interact with insurance companies, and countless other seminars on what in my opinion is the Beast—Institutional Man—flood in with the mail of medical doctors across the country.

The newspapers inform doctors incomes are down.

In psychiatry, my specialty, most people can't afford individual psychotherapy of the 45 to 50 minute therapeutic hour, and they certainly can't afford what actually works: the two to three hour to four hour psychotherapeutic hour—so as reported in the Psychiatric News, there is more group therapy as a substitute, not as the treatment of choice.

The various specialties of the medical field, together and separately, consume huge amounts of time in the battle for adequate dollars to treat.

The chiropractors have taken a severe blow as a result of serious losses in their attempts to lobby the legislature. Some of their homes are on the market now at bargain basement prices. Those among the chiropractors who have survived scramble to get innovatively creative within the institutional funding system, playing an ever-intensifying game of the paper chase, and/or learn to scale down.

The news has it that many medical doctors are going for MBA degrees to enter administrative positions in a desperate attempt to maintain income.

The Institutions, in my opinion, are not in trouble, they're in rubble. Only the illusion remains—like seeing a dead friend in the chair in which he always sat.

The Institutional Age has ended.

Although terrified, frightened, too damn busy filling out forms, and trying to care for patients with increasing overhead and decreasing income, and almost always perceived as rich, many of my colleagues appear to be clinging to the structures of the past. They may be increasing their own tension, frustration, and anger, firing blind volleys at the insurance industry, which itself has been regulated into a kind of HMO. Even as they win temporary reprieves by decreasing payments, increasing paper hassles, in effect, providing less and less coverage for care, the insurance companies themselves are as doomed at the chiropractors and those of us who rely on them, and those of us who actually expect the various government bureaucracies to provide adequate funding and not strangle the autonomous physician into a hamstrung puppet tugged by increasingly severe, impossibly complicated guidelines that render the actual practice of medicine less and less possible.

Yet, I am optimistic. Everything is okay. The physician who wants to teach by his/or her example how to change with the changing times does what he loves to do: teach, advise, and treat patients.

If a patient wants heart-centered care (pun intended), the physician who loves to be a physician is always there. Before third party coverage, medicine thrived, the physician had greater respect, in fact, was generally loved by patients who rarely if ever sued him. The physician did not see patients at 5 to 15 minute clips, a hearty handshake and a generic few words to establish rapport.

Physicians gained their full-of-wonder reputation as caring people with skill by interacting with patients and families, spending blocks of time making "house calls", and no amount of technology, quick interventions, writing of prescriptions without deep personal communication and interaction with patients can substitute.

Patients who love their doctors, and doctors who love their patients are learning that personal relationships with one another as human beings is primary. Technology secondary. Even science itself becomes useless if it is inhumane.

Blase Harris, MD

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Medical School Hotline

USMLE Performance of Medical Students at the John A. Burns School of Medicine

by Gwen S. Naguwa, MD, Associate Dean, Office of Student Affairs

Recent performance of medical students at the John A. Burns School of Medicine (JABSOM) on the United States Medical Licensing Exam (USMLE) has been used frequently to question the quality and effectiveness of the curriculum. This article provides background on the exam itself, clarifies its purpose, and reports accurate aggregate results and trends for JABSOM medical students.

The United States Medical Licensing Exam, a joint program of the National Board of Medical Examiners (NBME) and the Federation of State Medical Boards, provides a common evaluation system for measuring knowledge and cognitive competence of all applicants for medical licensure in the United States. In a transition period which began in 1991 and completed in 1994, the USMLE has replaced the Federation Licensing Examination (FLEX) and the NBME Parts I, II and III, and currently is the only path to licensure in the United States.

Beginning with the NBME Parts I and II and continuing on with the USMLE, despite consistent disclaimers from the National Board that, "It is important to understand that the examinations have not been developed for the purpose of assessing preparation for postgraduate education"[1], nor for program evaluation, unless the specific objective of the curriculum is to "teach to the test," scores continue to be used for both purposes. In a comprehensive article published in Academic Medicine, Nungenster, et al[2], emphasize that the general purpose of an examination should be the primary factor in determining how the scores are defined and reported. Since the USMLE is primarily a certifying exam used as part of a licensing process, its main objective is to differentiate between examinees who possess necessary knowledge and skills and those who do not, which is more consistent with a pass/fail classification. The Josiah Macy, Jr. Foundation, concerned with the increased use of scores to evaluate student achievement and to judge the quality of medical school curricula, in their GPEP Report[3], also called for pass/fail reporting and the elimination of total and subject-specific scores. The report goes on to point out that, "the present, passive system of medical education is based largely on memorization and recall. In over 70% of US medical schools, students are required to take the nationally standardized, multiple-choice examinations...To a limited degree, multiple-choice tests can be used to assess problem-solving abilities, but they largely measure a student's store of memorized information. They do not assess learning skills that medical students should acquire in order to keep pace with medical progress."

It is specifically this last skill which is the primary emphasis of JABSOM's Problem-Based Learning curriculum, and therefore, in the minds of some of the faculty, a more accurate interpretation of students' scores is that it is more a reflection of their success in acquiring these skills than what they know. In other words, they have learned how to learn.

With this background, JABSOM student performance on the more recent USMLE Step 1 administration (June 1995) closely matches the national norm, including the mean total score (205/207) and passing percentile (92%/93%). Inspite of the lack of discipline-specific courses, none of the mean test scores in the individual subject areas (Behavioral Sciences, Biochemistry, Gross Anatomy & Embryology, Histology & Cell Biology, Microbiology & Immunology, Pathology, Pharmacology, Physiology) were significantly below the national mean. A comparison of the performance of pre-PBL and post-PBL classes is complicated by the fact that the transition from the NBME exams to USMLE exactly coincides with JABSOM's change in curriculum, and included a change in score scales and discipline categories. However, a rough comparison of passing percentiles revealed that the three pre-PBL classes (83%, 93%, 92%) and most recent three post-PBL classes (86%, 91%, 92%) were fairly comparable.

What has been even more gratifying is that performance of JABSOM students on the USMLE Step II has shown a consistent incline, with the passing percentile (96%/92%) and total mean score (207/202) slightly exceeding the national norms on the most recent administration (August 1995). In addition, scores in the individual discipline areas (Health & Health Maintenance, Understanding Mechanisms of Disease, Diagnosis, Principles of Management, Medicine, Obstetrics & Gynecology, Pediatrics, Preventive Medicine & Public Health, Psychiatry and Surgery) were all consistently above the national mean. The transition from the NBME Part 2 to the USMLE Step 2 took place in 1991 and did provide an opportunity for comparing the performance of one pre-PBL class with post-PBL classes using the same exam format. The analysis revealed that the total mean scores were identical, with a dip in the passing percentile (94% to 87%) between the last pre-PBL class and the first PBL cohort. However, a similar decline was seen nationally, and the overall passing percentile has since been dropped (through the normalization process) from 95% to 92%.

In summary, while the USMLE is designed primarily as a certifying exam, it has been used to evaluate individual students as well as curricula in medical schools. More specifically, critics of JABSOM's Problem-Based curriculum have cited poor student performance as evidence for the ineffectiveness of the program. Although the caveat mentioned above and limitations inherent therein are recognized, recent results indicate that JABSOM students are performing at or above the national norms on the USMLE.

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Transient Blindness in a Preeclamptic Patient Secondary to Cerebral Edema

Thomas Shieh MD, Thomas S. Kosasa MD, Elbert Tomai MD, Roy T. Nakayama MD

Blindness associated with a cerebral lesion has been described as cortical blindness. This is the first reported case in which computerized tomography has documented cerebral edema to be the cause of cortical blindness in a preeclamptic patient.

Blindness associated with preeclampsia is rare and, in most cases, is a result of ophthalmological changes such as retinal edema, retinal detachment or central retinal artery thrombosis. Grimes et al[1] described the first case of cortical blindness in a preeclamptic patient based on a normal ophthalmology examination, and the presence of bilateral cerebral lesions in the occipitoparietal cortex demonstrated by computed tomographic scan. Due to limitations in the CT scanning equipment of that generation, the lesions were thought to represent either cerebral edema or hemorrhage. Using improved CT scanning equipment, we determined that the lesions in the occipitoparietal cortex in our patient with preeclampsia and transient blindness were found to be from cerebral edema.

Case Report

A 34-year-old primiparous Chinese woman was admitted to the hospital at 32 weeks of gestation with a diagnosis of preeclampsia. She presented with a blood pressure of 155/100 mmHg and 3+ proteinuria. Her highest blood pressure during her prenatal visits was 110/70 mmHg, and urine was negative for protein at every visit. Examination of her eyes revealed normal disks, maculae, and vessels. Her neurologic examination was normal, and there was no evidence of hyperreflexia. Admission hemoglobin was 12.3 gm/100 ml, uric acid 5.5 mg/100 ml, platelet count 197,000 per mm3, creatinine 0.7 mg/100 ml, blood urea nitrogen 9 mg/100 ml, and serum glutamic oxaloacetic transaminase 21 mg/100 ml. A 24-hour urine examination revealed proteinuria of 8 gm. On bedrest, her blood pressure returned to 120/80 mmHg.

The second day of admission she began to complain of headaches and her vision acuity was reduced to light perception only. Her blood pressure had risen to 130/90 and she was infused with 4 gm of magnesium sulfate over 20 minutes, followed by continous infusion of 2 gm per hour.

Both pupils were normal in diameter and reacted fully to light. A repeat fundoscopic examination revealed normal vessels, disks, and maculae in both eyes. Her blood pressure rose to 170/105 mmHg and a cesarean section was performed under general anesthesia. A female infant weighing 1338 gm was delivered with Apgar scores of 7 and 9.

A CT scan using a General Electric Advantage Highlight System was obtained following the cesarean section and showed hypodensity in both occipitoparietal lobes. This was diagnosed as cerebral edema (Fig. 1). Magnesium sulfate was continued for the next 48 hours at 2 gm per hour, and her blood pressure fell to 130/80 mmHg. Her vision returned to normal over the next 24 hours although she developed a problem with depth perception. Her vision was completely normal by the third postoperative day, and she was discharged on the fourth postoperative day. A repeat CT scan 6 weeks after delivery was normal (Fig. 2). A neurologic and ophthalmologic examination 6 months following delivery was normal.

Discussion

Antepartum transient blindness with preeclampsia in the presence of normal ophthalmologic findings has been reported in three patients prior to this case (Table 1). Although Grimes et al[1] postulated the etiology as a cerebral lesion by demonstrating hypodensity of the occipitoparietal region of the cortex on CT scan, Nishimura et al[2] failed to demonstrate any abnormalities on CT scan. Arulkuraran et al[3] found the CT scan to be normal in the most recent reported case of cortical blindness. In our case, the CT scan clearly demonstrated hypodensities of the occipitoparietal region of the cortex confirming the etiology of cortical blindness as a cerebral lesion.

Grimes et al[1] postulated that the observed lesions represented cerebral edema or cerebral vascular accident. Beeson et al[4] said cerebral edema was responsible for the findings of hypodensity in the occipital lobes in an eclamptic patient with cortical blindness since these lesions caused symmetric compression of the lateral ventricles and resolved with diuresis. A more recent report by Brown et al[5] suggested that the areas of hypodensity represented petechial hemorrhages accompanied by cerebral edema. Using improved equipment, the CT scan in this case clearly demonstrated that the hypodensities in the occipitoparietal region of the cerebral cortex was due to cerebral edema rather than hemorrhage.

Cortical blindness associated with preeclampsia or eclampsia has

Department of Obstetrics
and Gynecology
University of Hawaii
John A. Burns School of Medicine
and Kapiolani Medical Center
for Women and Children
Honolulu, Hawaii 96826

Reprint requests:
Thomas S. Kosasa MD
1319 Punahou Street
Honolulu, Hawaii 96826
Phone: (808) 949-2304
Fax: (808) 951-7004
Pager: (808) 577-8443

Table 1.—Reported Cases of Antepartum Cortical Blindness in Preeclampisa

Author	Year	Gestational age (wk)	Preclampsia	Computed Tomographic Scan	Resolution of Blindness Following Delivery
Grimes et al[1]	1980	41	Severe	Occipitoparietal lesion	24 hours
Nishimura et al[2]	1982	36	Mild	Normal	72 hours
Arulkumaran et al[3]	1985	36	Severe	Normal	4 hours
Shieh et al	1995	32	Severe	Ocipitoparietal Cerebral Edema	24 hours

Fig. 1.—A CT scan showing cerebral edema in both occipitoparietal lobes of the cerebral cortex with the right more than the left (arrow).



Fig. 2.—Normal CT scan 6 weeks following delivery.



been reported in 12 patients in the English literature. Seven of these patients developed blindness prior to delivery[1-4, 6-7] and four following delivery.[3,8] Blindness occurred in seven patients with preeclampsia[1-4, 6-7] and in five eclamptic patients.[2,4, 6-8] Every case of cortical blindness resolved spontaneously. The results from the CT scan of our patient with cortical blindness corroborates the CT results reported by Grimes et al,[1] who first postulated the etiology as a cerebral lesion. It further confirms the work of Beeson et al,[4] who suggested that the lesion represented cerebral edema.

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Herpes Zoster at School-Age: A Case Presentation and Discussion of the Unique Aspects Within the Pediatric Population

Martin L. Piette MD

This paper is a case presentation and discussion of a 12-year-old boy previously in excellent health who presents with dematomal herpes zoster. Although not unheard of, the occurrence of herpes zoster in the pediatric population is infrequent. This case provides the opportunity to address many of the aspects of herpes zoster that are unique to the pediatric population including epidemiology, pathophysiology, management and course, and the potential impact of the live attenuated varicella vaccine, recently approved for the prevention of the primary varicella infection, chickenpox.

Case Report

A twelve-year-old Chinese-caucasian male was well and in his usual state of excellent health, when on one Friday morning while at school he complained of a sharp, tingling pain on the back of his neck. The school nurse noticed a small papular, erythematous eruption in the region of the neck from which the patient had complained. The patient was found to have a low grade fever as well. His mother was notified and the patient was sent home. The mother attempted to relieve the symptoms by applying *Lanacaine* ointment and calamine lotion without much success. The next morning, Saturday, the extent of the eruption had spread following the C3 dermatome down the left side of his neck and up to the back of his hair line. The eruption had become vesicular and more erythematous. The patient also reported some weakness in his left arm. The patient was brought into the clinic and upon further questioning denied any recent outdoor treks, travels, changes in clothes, detergents, or soaps. The mother reported that the patient had had a *mild* case of chickenpox at a *very early age* and has otherwise been extremely healthy without any recent increased frequency of illnesses, weight loss, or night sweats.

On physical exam, the patient was a well developed 12-year-old male, nontoxic appearing but in moderate distress due to the painful lesions on the left side of his neck. Vital signs were within normal limits. The lesions on the left side of his neck had an erythematous, mildly edematous base with superimposed oval-round vesicles. The eruption extended down the left side of the neck to the mid-clavicular region with a few isolated lesions over the acromio-clavicular region. It extended up to his hairline with some scalp involvement. Eyes and ears were not involved. There was a mild degree of weakness on flexion against resistance on his left upper extremity. Sensory and coordination were intact. The remainder of the exam was entirely within normal limits.

A presumptive diagnosis of herpes zoster was made based on the history and physical findings. No confirmatory tests such as a Tzanck preparation, viral culture, biopsy, or immunoflourescence were performed. Based on the patient's history of excellent health, a workup of the patient's immunocompetence was deemed unnecessary. The patient was started on oral acyclovir. On follow up five days later, there was marked improvement. The number of lesions had decreased markedly and the existing lesions had dried and crusted over. The patient reported that he had regained his strength in his left arm.

Discussion

The recognition and diagnosis of dermatomal herpes zoster in adults and children is straightforward. Although not unheard of, the occurrence of herpes zoster in the pediatric population is infrequent. This case provides the opportunity to address many of the aspects of herpes zoster that are unique to the pediatric population.

Epidemiology

With an estimated 3 million cases of chickenpox a year in the U.S., greater than 95% occurring in children and adolescents, the prevalence of primary varicella zoster virus (VZV) exposure is nearly universal within the pediatric population.[1]

In contrast, the incidence of herpes zoster, which is the manifestation of the reactivabon of latent varicelia zoster virus from within the dorsal root ganglia, is very low in childhood. In individuals less than 10 years of age, there is an estimated incidence of 0.74/1000 patients versus an estimated annual rate of 3.4/1000 for the general population.[2]

John A. Burns School of Medicine
University of Hawaii
Dermatology Elective
*Preceptor: Norman Goldstein MD.
Author's Address:
4224 Waialae Ave. Suite 5-178
Honolulu, Hawaii 96816

*Special Thanks to Dr Frederick Maag.

Presenting findings; eruption predominantly restricted to C3 dermatome with a few isolated lesions on left shoulder.



Patient 5 days later status-post oral acyclovir. Eruption markedly improved, remaining lesions dry and crusted over.



There are several conditions or circumstances in children that have a higher incidence of herpes zoster than the general pediatric population (See Table 1). Acute lymphocytic leukemia (ALL) patients or children receiving immunosuppressive therapy, have the highest incidence of herpes zoster within the pediatric population. It has been estimated that herpes zoster occurs in 22-25% of children with ALL and a prior history of chickenpox.[3] Immunocompromised children are at greater risk for disseminated herpes zoster viith visceral involvement, particularly VZV pneumonia, and a 20 % mortality.[2] Children with HIV are commonly afflicted with herpes zoster but it rarely becomes disseminated. Herpes zoster occurring in infants is strongly associated with in-utero exposure to VZV.[4] Children afflicted with chickenpox, the primary infection of VZV, at less than 1 year of age, have a greater predisposition for developing herpes zoster later on in their childhood, particularly before the age of 7.[4,5]

Table 1.—Risk Factors for Herpes zoster in children

1) ALL and other malignancies.

2) Immunocompromised (treatments, HIV).

3) In-Utero varicella exposure.

4) Chicken Pox at age < 1 yr.

The dermatomal distribution of the cases of herpes zoster within the general pediatric population is similar to adults with the preponderance of cases of occurring between T2-L2. However, Terada et al. found some interesting variations in dermatomal distribution when the pediatric population was broken down by age. In children less than 7 years of age, the involvement of cervical and cranial nerve dermatomes was 41.7 % and 25 %, respectively. In children greater than 7 years of age, 78.9 % involved the thoracic dermatomes. Terada et al hypothesized that these findings may reflect the changing body proportions of growing children. If this is the case, Terada further hypothesized that the dermatomal site of herpes zoster may be a reflection of the region of highest preponderance of exanthems during the primary infection with VZV, chickenpox .[4]

Pathophysiology

It is firmly established that following primary infection, VZV remains in a latent state within the dorsal root ganglia. Herpes zoster represents the reactivation of this latent virus from within a particular ganglion. The epidemiology of herpes zoster indicate that latency and reactivation is dependent on both host and viral factors. Attempts to elicit the pathogenesis of herpes zoster have been confounded by the fact that human beings are the only known harborers of

VZV. The high incidence of herpes zoster in the immunocompromised indicates that the immune system plays a role in maintaining latency, particularly cellular immunity.[6] The higher incidence of Herpes zoster in adults, it is believed, may reflect a natural decline in cellular immunity with age.[6]

The occurrence of herpes zoster in children is even more puzzling. In some cases, it may be the result of an immunocompromising illness or therapy, but in healthy children, it remains a mystery. Analysis of blood drawn from healthy children with herpes zoster often resembles that of a primary infection with high titers of Natural Killer Cells and IgM antibodies despite having been previously exposed to the virus.[7] It has been hypothesized that this apparent loss of immunologic memory may be due to an incomplete or immature immunologic response at the time of primary exposure to the VZV. An immature immune response has been the long-held belief for the mechanism behind the higher frequencies of herpes zoster in infants exposed to VZV in-utero and in children who had a primary VZV infection at less than 1 year of age. In other children, the occurrence of herpes zoster may reflect an incomplete immune response to perhaps a mild primary VZV intection. However, a relationship between herpes zoster and the severity ot primary VZV infection has not been established.

Studies of immunologic memory status have revealed that VZV specific cellular immunity is enhanced by frequent exposure to VZV.[3,6] It is hypothesized that multiple exogenous exposures to, or subclinical endogenous reactivation of, the VZV may serve as a booster to the immunologic system and may aid in maintaining the virus in their latent state within the ganglia.

Management and Treatment

In the management and treatment of herpes zoster in children, the pediatrician may be faced with several questions that are unique to the pediatric population.

- Should anti-viral medications such as acyclovir (Zovirax), famcyclovir (Famvir), or valacyclovir hydrochloride (Valtrex) be employed? Or are there toxicities or precautions unique to the pediatric population that one should be aware of?
- Should a healthy child with herpes zoster be further evaluated for other immunocompromising illnesses?
- Is herpes zoster a precursor to a malignancy?
- Will there be any persistent neuralgia as may occur in adults?
- And the inevitable question of all parents of school age children, is the child contagious, should he stay home from school?

In most cases, herpes zoster in otherwise healthy children runs a benign course, requiring only supportive treatment with non-aspirin analgesics and local wound care. The exceptions to this are herpes zoster involving the first branch of the trigeminal nerve or within the ear canal. Forty percent of patients with initial zoster lesions occurring on the forehead and eighty percent with initial lesions on the tip of the nose, will develop ocular involvement.[8] Because ocular and auditory involvement may lead to significant permanent impairment, more aggressive therapy may be warranted.

The indications for and usage of antiviral agents in the management of pediatric herpes zoster is still quite controversial. The safety and efficacy in children has not been established for famcyclovir and valacyclovir hydrochloride. There has been considerably more experience with the use of acyclovir. However, it still has not been adequately studied for the use on children less than 2 years of age.

In 1992, the FDA approved the use of oral acyclovir for the treatment of varicella infections in otherwise healthy children. In 1993, the American Academy of Pediatricians (AAP) released the following recommendations tor the use of oral acyclovir in varicella infections:

American Academy of Pediatrics Recommendations.[9]

1) Oral acyclovir is not recommended routinely for uncomplicated varicella in otherwise healthy children

2) for children at increased risk of severe varicella or its complications (older than 13 yrs., those receiving chronic corticosteroids or aspirin therapy, those with chronic cutaneous or pulmonary diseases), oral acyclovir should be considered, if it can be initiated within 24 hours of the rash.

3) When given, oral acyclovir should be administered for 5 days. The patient must maintain adequate fluid intake.

4) Primary varicella or recurrent zoster in immunocompromised and virus mediated complications of varicella in normal hosts should be treated with intravenous acyclovir.

5) Oral treatment is not recommended in pregnant adolescents with uncomplicated disease.

6) Otral acyclovir may be considered for household contacts because they usually have more severe illness.

In their review of the available literature and own clinical experience, Rothe et al recommended the following guidelines, specifically for the treatment of Herpes zoster in children:

Recommendations for Acyclovir for Treatment of Herpes zoster in Children.[8]

1) Ocular zoster in adolescents and children and pregnancy: treat with oral acyclovir and refer to an opthalmologist for continuing care.

2) Zoster in adolescents: treat with oral acyclovir if identified within 72 hours of exanthem.

3) Zoster in children: do not treat, as it is relatively benign.

4) Zoster in Atopic patients receiving systemic corticosteroids: Do not treat, as it is relatively benign.

In children, acyclovir appears to be better tolerated than adults.[8] Possible side effects are nausea and vomiting which occurs in less than 8 % and 3 % of the pediatric population, respectively.[10] There is even lower incidence of diarrhea, headaches, and cutaneous eruptions. Dehydration and over-dosage may lead to renal precipitation. Renal function should be closely monitored in the neonate population.[11]

Herpes zoster eruptions are contagious to individuals not previously exposed to the varicella virus. However, it is estimated to be only one third as contagious as primary varicella infection.[12] Transmission by direct contact with the lesions has been established. Respiratory transmission, the main mode of transmission in primary varicella infection, has not been conclusively excluded as a mode of transmission to susceptible individuals.

Although there is a higher incidence of herpes zoster in childhood malignancies, the reverse has not been found to be true. No association between herpes zoster and subsequent cancer has been found. Prospective studies of individuals with herpes zoster have shown the same incidence of malignancies as the general population.[12] From this information, it appears that further evaluation on an otherwise healthy child is unnecessary unless dictated by their history.

The occurrence of post-herpetic neuralgia in children is still questioned. In general, it can be said that herpes zoster has a much

milder course in children than adults with a minimal risk of post-herpetic neuralgia, the incidence of which is as high as 43% in some adult studies.[8] In their study of childhood zoster over a 20 year period, Guess et al found no incidence of post-herpetic neuralgia.[5]

Live Attenuated Varicelle Vaccine

With the recent AAP recommendation of the live attenuated varicelia vaccine for the prevention of primary varicella infection (chickenpox), there has been much discussion on its potential impact on the incidence of herpes zoster. It was initially hoped that with the eradication ot primary varicella infection by the vaccine, there would be a similar impact upon herpes zoster. However, further studies of the attenuated vaccine virus have shown that it, too, can cause latent infection within the ganglia and dermatomal zoster eruptions upon reactivation.[13] As a result, there has been a growing concern that there may possibly be an increase in the incidence of herpes zoster as a result of the new vaccination policies.

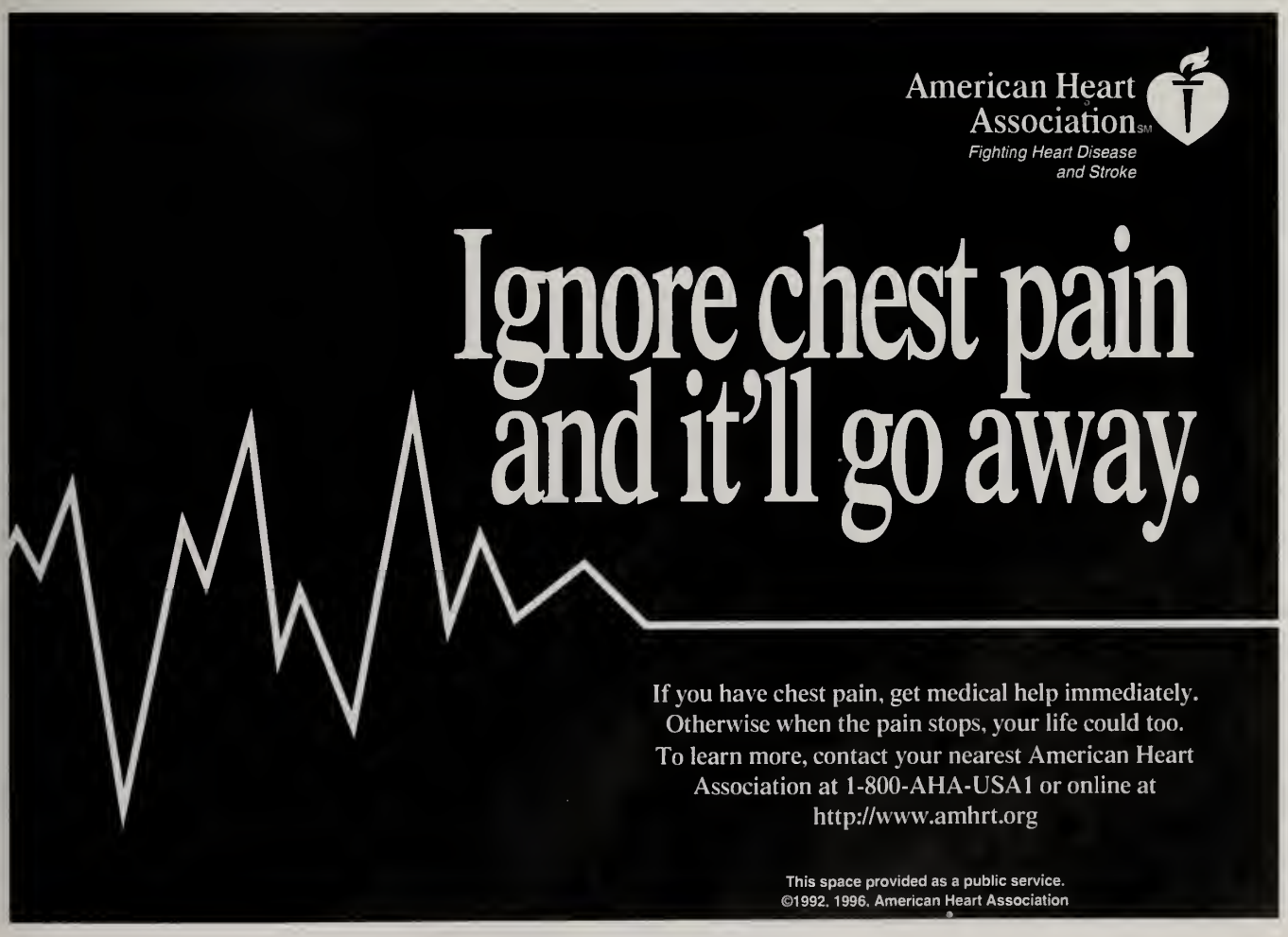
Current U.S. studies show no increased incidence of herpes zoster in heathy immunized children. A 4 year follow-up study of 548 children with ALL immunized against varicella actually showed a decrease in the incidence of herpes zoster.[13] This finding was significant in that these patients are normally considered at highest risk for varicella reactivation.

There may be several explanations for the decreased incidence of zoster after vaccination. One is the virus is attenuated. Another is that the exanthem of primary varicella may be necessary for the virus to gain access to the sensory nerves and reside within the dorsal ganglion region.

The varicella vaccine may play another role in the prevention of herpes zoster. Immunologic studies of adults receiving vaccination have shown higher levels of VZV specific T-cell levels.[6] These findings imply that the varicella vaccine may have the potential of being used as an immunologic booster with the hope of preventing herpes zoster in adult populations as well.

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Council Highlights

June 7, 1996
Roger Kimura MD, Secretary

The meeting was called to order by Dr. Carl Lehman, President at 5:30 pm.

Those present were J. Spangler, President-elect, R. Kimura, Secretary; L. Howard, Treasurer; F. Holschuh, Immediate Past-President; AMA Delegates: C. Kam, R. Stodd; Alternate AMA Delegate: A. Kunimoto; Speaker: H.K.W. Chinn; Component Society Presidents: L. Sonoda-Fogel for Dr. Bade, Hawaii; T. Crane, Kauai; T. Smith , West Hawaii; Councilors: P. Chinn, W. Dang, P. DeMare, M. Shirasu, J. Betwee, C. Kadooka, A. Bairos; Past Presidents: W. Dang, G. Goto, J. McDonnell, S. Wallach, N. Winn; Young Physician Delegate: C. Goto; HMA Alliance: C. Gutteling.

HMA Staff: J. Won, N. Jones, B. Kendro, L. Tong, P. Kawamoto, J. Asato, J. Estioko, A. Rogness-recording secretary.

Minutes: The minutes of the April 12, 1996 meeting were approved as circulated.

Hawaii Health Information Corp.(HHIC): Dr. Sharon Vitousek, HMA's representative, gave an update on what HHIC is doing and where it is going. The goal is to give patients better care and to cut the cost of health care delivery.

- Dr. Lehman reported: 1) he appeared on "Dialog" in a discussion of health care issues in Hawaii; 2) the Distinguished Medical Reporting Awards Banquet and talent show was outstanding; 3) he appeared on KGMB news to discuss the Hawaii State Employees' Retirement Fund including investments in tobacco industries; 4) as a member of the Hawaii Health Council he met with the President of the Hawaii State Bar Association to discuss decreasing the cost of medicine by utilizing alternative dispute resolution methods to circumvent expensive court proceedings; 5) the HMA held two evening seminars on "Coding Reimbursements." There is also a waiting list for another seminar; 6) the contract for Central Verification Services has been signed and marketing will begin within two months; 7) the Membership Task Force has met and is working on recruiting and retaining members. Dr. Spangler, Chair of the Task Force is considering three subcommittees to carry out appropriate membership functions; 8) that the request to Chairs and Commissioners for their annual reports will be going out early July. The annual reports should state the goals of the committee, accomplishments and suggested goals for next year. The deadline for budget requests is August 16, Annual Reports August 26 and Resolutions September 17; 9) HMA acted on behalf of physicians regarding Medicaid delinquent payments; 10) Contact was made regarding the addendum to insurance contracts where physicians would assume liability. After HMA's immediate action, the clause was rescinded; 11) a No-Fault meeting will be held in preparation for a special session of the legislature.
- Dr. Spangler, President-elect reported that on July 22 at 5:30 p.m. there will be a meeting to go over the HMA Committee/Commission Structure with the Chairs and Commissioners.
- The HMA Alliance gave an extensive report from October 1995 - July 1996 on all the functions and fundraisers they have participated in.

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For Action

The HMA Council approved the following—

- The Tobacco Task Force's recommendation that HMA urge Governor Cayetano to have Hawaii join a class action suit against tobacco companies.
- The Tobacco Task Force's recommendation that the committee write a letter to Aloha Medical Mission, bringing to their attention that one of their sponsors, a tobacco company, contributes to public health problems.
- The Executive Committee's recommendation that Drs. Ed Montell, Frederick C. Holschuh, Deen Wong, Donna McCleary, Ron Kwon and Steven Moser will be nominated for the Board of Directors, Hawaii Health Systems Corp.
- The Executive Committee's recommendation that Drs. Cynthia Goto and Elizabeth Adams be HMA representatives to help develop standards and procedures for sterilization of incapacitated minors.
- The Legislative Committee's recommendation to honor Senator Rosalyn Baker and Representative Suzanne Chun-Oakland as HMA Legislators of the year 1996.
- To send a certified letter to delinquent dues members, emphasizing why they should belong to the HMA.

Component Society Reports

Honolulu.—Dr. P. Chinn reported that the HCMS Finance Committee will be meeting soon to look at a mid-year budget revision. The HCMS is also planning a retreat at Kualoa Ranch which will be in August. Dr. McDonnell reported that last month's Mini-Internship program was a success.

Kauai.—Dr. F. Holschuh reported for Dr. T. Crane that the physician/patient complaints Dr. Crane discussed at the last Council meeting regarding various physicians were successfully resolved on the County level on an informal basis.

West Hawaii.—Dr. T. Smith reported that North Hawaii Community Hospital is open and already at full capacity. The West Hawaii County Membership meeting will be scheduled in the near future.

Hawaii.—Dr. L. Sonoda-Fogel reported for Dr. E. Bade. Their county will be having a picnic and will invite new physicians. The Family Practice Program residents and students will also be invited.

Maui.—Dr. Betwee reported on recent experiences with the DEA and Medicaid. Problems need to be reported to the HMA as other physicians may have similar experiences.

For Information

Colorado AMA Resolution.—HMA is in support of this resolution that the AMA prepare a model state legislative resolution concerning the equitable tax treatment of expenditures made for health care purposes and provide it to all members of the Federation for consideration to be introduced into their next state legislative sessions.

HMA Resident Physician Section.—A group of residents are interested in forming a resident section of HMA. HMA is hosting a party for them on July 11 at Pizza Bob's. Clinical Laboratories made a generous contribution towards the establishment of the resident's section.

Long Range Planning Committee.—Dr. Cynthia Goto will chair a focus group inviting young member and nonmember physicians. The purpose of the group is to get feedback from them on how HMA is relevant to them and how the organization can best serve them. This will be reported back to the Long Range Planning Committee.

Staff was excused and Council proceeded into Executive Session at 7:50 p.m.

News and Notes

Henry N. Yokoyama MD

Life in These Parts

Directory Numbers Speak for Themselves
(by Robert Kraus)
Nuggets from the 1996 edition **Yellow Pages**

Attorneys 72 pages; Physicians 58 pages; Automobiles 51 pages; Dentists 27 pages; Contractors 17 pages and Computers 16 pages.

Leading Families

Lees, 25 columns; Wongs, 20-1/2 columns, Kims, 14 columns; Youngs, 12-2/3 columns; Chars, 12-1/4 columns; Chuns and Smiths, 10-1/2 columns; Chings, 9 columns; Laus, 8 w/3 columns; Lums and Nakamuras, 8 columns each.

New Isle Health Plans on the Horizon

Robert Nickel, HMSA VP for Integrated Delivery Systems, announced that the following health plans are being developed: (viz HMO's formed by hospital systems with HMSA as insurer)

- The Kapiolani Health Hawaii Network (Kapiolani hospital & HMSA)
- Kuakini Medical Center, the two St. Francis hospitals, Castle hospital & HMSA.
- Queens Medical Center, the Queen Physicians group & HMSA
- Straub Clinic & Hospital

Fred Fortin; HMSA assistant VP for community relations comments; "Whether all the new groups will be able to compete effectively remains to be seen. Within the flurry of networks being formed, employers will have a wide selection of health plans."

Bob Nickel explains, "Kaiser, the grandfather of HMO's is a fully integrated service. The other organizations may be one step up from fee for service programs or somewhere in the middle."

Kim Thorburn's Departure

"We are sorry to hear that Dr Kim Thorburn, Hawaii's chief prison doctor, will be stepping down. With Thorburn's departure, the need for vigilance in inmate health care will, if anything, increase. We hope the department is committed to finding a replacement who is as dedicated to inmate health care."
(From Advertiser editorial April 9)

Kim was forthright: "I have been extremely troubled to be associated with a department whose administration condoned abusive treatment that was tantamount to torture."

Medical Missionary

(Abstracts from Honolulu Magazine Mar '96)

Likeable Dick Frankel is medical director of Queen Emma Clinic and professor of medicine, John Burns Medical School. He is also consultant to WHO on Hansen's disease and tuberculosis, which requires traveling to China, the Philippines, Malaysia, Tonga, New Guinea, the Solomon Islands and more.

"The traveling is arduous. Endless kidney jostling truck trips into areas plagued by gunfire as by tuberculosis, this seasoned traveler has learned all the tricks, even to maintaining a vegetarian life style in places where getting meat for meal is cause for celebration. Says Dr Frankel with a grin, "I always carry jars of peanut butter and jelly."

Outcry from the Inferno (Shura Kyokan)

Physician-author Jiro Nakano scores again with an anthology (translations of 100 agonizing Tanka written by survivors of the Hiroshima holocost) Jiro, former Hilo-UH Med School physician is currently director of the International Division of

➤ *Continued on Next Page*



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Kobe Kaisei Hospital and personally witnessed these Hibakusha. ($10—Bamboo Publishers)

Potpourri

"Have you ever had any accidents?" the insurance agent asked the cowboy.

"Nope," the wrangler replied, "though a bronco kicked in two of my ribs last year, a bull gorged me awhile back and I sprained my shoulder when my horse threw me."

"Wouldn't you call those accidents?"

"Naw. They did it on purpose."

Playboy Party Jokes (May '96)

Conference Notes

Male Erectile Dysfunction

Lecture by Robert Kessler Stanford Professor of Urology at QMC-UH Friday morning March 31, 1995.

What is impotence?

"Inability to achieve and maintain an erection adequate for vaginal penetration for mutual satisfaction."

Prevalence

1.9% at age 40; 25% at age 60; much higher in certain diseases. "Let's have a show of hands: How many of you are impotent? Can't get your hands up either?."

Neurotransmitters

- Acetylcholine
- Catecholamines
- VIP
- Prostaglandins
- Endothelial derived substance

Neurogenic

Psychogenic: T12-L1
- Sympathetic
- Olfactory

Reflexogenic: S2-S4
- Parasympathetic
- Direct stimulation: penis, bladder, rectum

Hemodynamics: 6 phases

Frequency of Sex

20s—tri weekly
40s—try weekly
60s—try weakly
70s—try anything

Categories of Impotence

- Psychogenic
- Organic
- Mixed

Evaluation of Impotent Male

- History: definition; progression; other factors during progression; present level
- Physical Exam
- Diagnostic Tests

Lab studies
- blood sugar
- serum testosterone
- serum prolactin etc.

Other Studies
- NPT
- Penile BP
- Nerve conduction
- Cavernosograms
- Angiographic
- Neurologic Impotence
 - 10 to 20% thought to be neurologic
 - History: Diabetes; trauma; surgical trauma; MS; tumors

*Tests for Vascular Integrity

Penile: Brachial Index; arteriography; doppler sonography.

Endocrine Disorders

5% of total
- Hyperprolectanemia
- Hyperthyroidism
- Hypothyroidism
- Cushings Syndrome
- Uremia
- Diabetes: 2-5 times greater; 30% Type I by age 30 (due to vascular rather than neurogenic cause) No hormonal changes
- Medications: Antihypertensive drugs (but not ACE and calcium channel blockers)

Treatment Options
- Sexual counseling
- Hormonal Therapy
- PEP (Pharmacologic Erection Programs)
- Vascular surgery
- Vacuum Devices

*Vacuum Devices

very successful; simple, non-invasive; reversible
58% satisfied patients; 57% satisfied partners

Advantages

Increases size of erections; some improve vascular circulation.

Problem

Numbness in 19%

*PEP

Papaverine; PGE1; Phentolamine

*Penile Implants

1936; rib stent; 70's silicone inflatable



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Classified Notices

To place a classified notice:

HMA members.—Please send a signed and typewritten ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in *HMJ* as space is available.

Nonmembers.—Please call 536-7702 for a nonmember form. Rates are $1.50 a word with a minimum of 20 words or $30. Not commissionable. Payment must accompany written order.

Position Wanted

Ophthalmologist.—Canadian-trained/American Board certified, wishes to do locum in Hawaii. Contact Michael Myles MD, FRCSC, 211-1 Centrepointe Dr., Nepean, Ontario, Canada, K2G 6E2. Tel (613) 226-8872, Fax (613) 226-2803.

Position Available

Lahaina, Maui.—BC/BE FP.—Well-established multispecialty group. Ambulatory care, minimal call. Position available summer 1996. Send CV to Dr Gilbert, 130 Prison St, Lahaina, HI 96761.

Help Wanted.—Health Care Division Administrator for Department of Public Safety (PSD), State of Hawaii, responsible for planning, budgeting, organizing, implementing, and operating health services for individuals detained and incarcerated by the PSD. Major duties include supervision of health professionals and paraprofessionals who provide health services to the detained and incarcerated; management and administration for development and implementation of health services policies for all State correctional institutions; clinical duties which include quality assurance programs, medical consultation, medical oversight of clinical issues including pharmacy and therpeutics, disease prevention, investigation of communicable disease outbreaks. Reports to Deputy Director for Corrections, PSD. Must have current Hawaii medical license and completion of an accredited residency at a recognized institution. Three years experience in correctional medicine with two years in correctional health services administration.

Applicants should submit letter of interest to HMA Correctional Health Committee, 1360 S. Beretania Street, Honolulu, HI 96814 or FAX to (808) 528-2376.

Office Space

Medical Arts Bldg.—250 sq. ft. to 997 sq. ft. office space avail. Pharmacy, x-ray lab; Clinical Laboratories of Hawaii on-site. Call Chrissy Young (S), 524-2666.
Office to rent.—In town. Fully furnished turnkey operation. Rental $2.50 sq. ft. Pager 361-5164.

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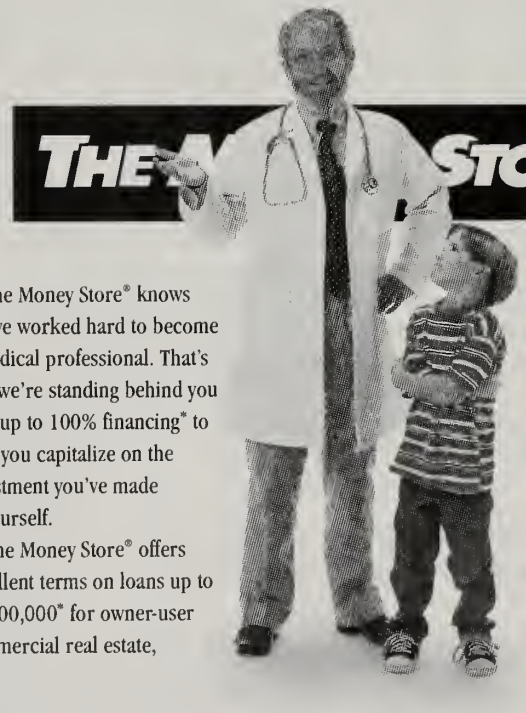
Locum Tenens.—For family practice, no OB or PEDS. GP, FP, IM are OK. Location Hilo, for two weeks, mid to end of July. Compensation negotiable. Contact Richard Lee-Ching MD, 780 Laukapu St, Hilo, (808) 961-6922.

Services

The Pacific Center for Dermatology and Phototherapy is now receiving referrals for dermatology consultations and/or phototherapy. Lois Y. Matsuoka, MD., FAAD., FACP, (former faculty mem., Jefferson Med. College.). Ala Moana bldg., Suite 911, 1441 Kapiolani Blvd., Honolulu, HI 96814. (808) 941-5506.

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The Weathervane

A politician will plan to build a bridge even when there is no river.

Despite the failure of HCFA's own pilot study, and irrefutable testimony from other sources such as the American Academy of Ophthalmology and the American Society of Cataract and Refractive Surgery, the Clinton administration persists in resurrecting the cataract "Centers of Excellence" plan for discounted medical care. In 1994, the Clinton health reform plan predicted a savings of $110 million/year with the "centers", but now the figure has dropped to $29 million with this Wall-Mart care. However, even that dust-budget figure will certainly fail to be reached with the projected cuts in Medicare reimbursement.

Where there's a will, there's a won't.

Police brought a rape suspect to a hospital emergency room to obtain a blood sample for evaluation. He was not a patient and did not request any medical service. Furthermore, the suspect refused to give his consent and stated he would actively resist. The doctor and other hospital personnel refused to draw a blood specimen, but then were prosecuted for "obstruction of, or interference with, the conduct of a law enforcement investigation." The charges were dismissed when a Superior Court judge ruled that hospitals have no legal duty to obtain bodily samples from unwilling police suspects. Still, irremediable professional damage can result from the media attention when a criminal action is brought against a physician, even when all charges are subsequently dismissed. Although he was arrested, to date no charges have been brought against the Hilo ophthalmologist who wrote a legitimate prescription, but the damage inflicted to his reputation is done.

Neurosis is a communicable disease.

For decades, researchers have tried and failed to incriminate coffee drinking with increased morbidity for heart disease, cancer, and other less common ailments. However, a new study reported in the Archives of Internal Medicine involving 86,626 nurses over a 10 year period, found that coffee drinkers (two or more cups/day) had less hypertension, diabetes, and hypercholesterolemia, and were 66% less likely to commit suicide than the baseline group. Moreover, they were less likely to take tranquilizers, and reported improvement in mood and less irritability following coffee consumption.

Any event, once it has occurred, can be made to appear necessary by a competent public relations man

Historically, the Cleveland Clinic has depended upon its tax-exempt status as an academic institution for tertiary eye care. Now, the Cleveland Clinic has entered into an exclusive ophthalmology contract with Emerald Health Network Inc. Apparently, without application or with credentialing, invitation was extended to those ophthalmologists who agreed to refer specialty eye care cases to the clinic. Other subspecialists in the community and general ophthalmologists who do not refer to the clinic, are out of the network and understandably irate. Record another victory for the managed care nabobs in their abiding design to turn doctors against one another, while they seek the lowest common denominator.

About that mysterious whooshing on Haleakala with the Playboy photo shoot

Dr James Bachman, reporting in the New England Journal of Medicine, has seen more than a dozen women with surgically enhanced breasts who experienced swishing bosom noises while at altitudes above 9,000 feet. Apparently air in the implants expands enough to allow implanted saline to slosh around. The breasts become silent at sea level, and whistling originates from other sources.

You too can be a rank insider

If you happen to have Allergan Inc. stock in your portfolio, you should be pleased at its recent rise and potential. Pharmacia-Upjohn Inc. has developed a new anti-glaucoma drug called Latanoprost which in clinical trails appeared to be more effective than Merck's Timoptic (numero uno glaucoma drug seller). Moreover, the new drug does not have the cardiac risk inherent in the beta-blockers. Because Pharmacia needs to develop a bigger, specialized sales force to make the most of Latanoprost's marketing potential, the word is that they want to buy Allergan, the Irvine, California, company said to be worth about $2.5 billion. Neither company is talking, but the Allergan acquisition would place Pharmacia second only to Alcon Laboratories, Inc. in global market share.

There is always someone who can make it a little worse and sell it a little cheaper

Valujet was the envy of other airlines, because of its high profit margin and $120 million in ready cash. However, at least one federal investigator had refused to fly on the airline, "primarily because they were flying old aircraft, their pilots were below grade and had limited access to training," and the management staff was thin and has not kept up with growth. Obviously, this is an airline which functions "on the cheap." Following the crash and while denying any oversight failure, the FAA hired 91 new safety inspectors. Meanwhile, in medical managed care, quality has also gone "on the cheap" with restrictive contracts, limited formularies, staff reductions, use of allied health practitioners, and other penny-pinching practices. We may not see 120 people in a 27 year old airliner decimated in a swamp, but the degradation is there, no less.

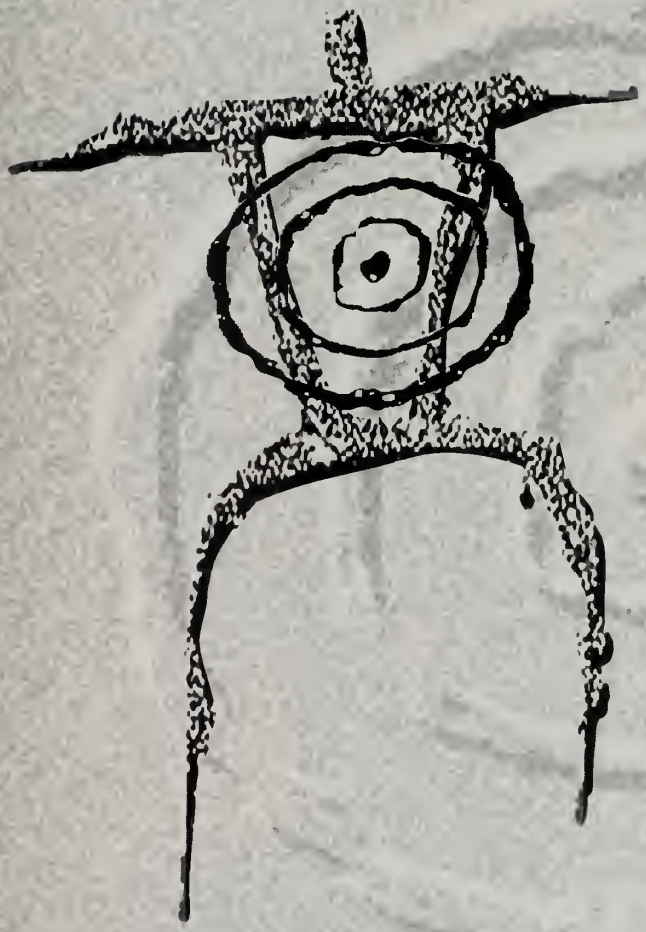
You can't make up anything any more. The world itself is a satire.

A national survey of 350 department chairs and service chiefs at various centers of academe was conducted by *American Health* magazine. From this meaningless exercise 1,000 "best doctors in America" were named and published. How comforting!

Addenda

- 50% of baby boomers say they smoked pot, but now 74% of that group say they would be upset if their children even tried marijuana.
- Americans spend $2 billion/year on "organic" foods.
- Marlon Brando's new sitcom—My Three Chins.

Aloha and keep the faith—rts. ■



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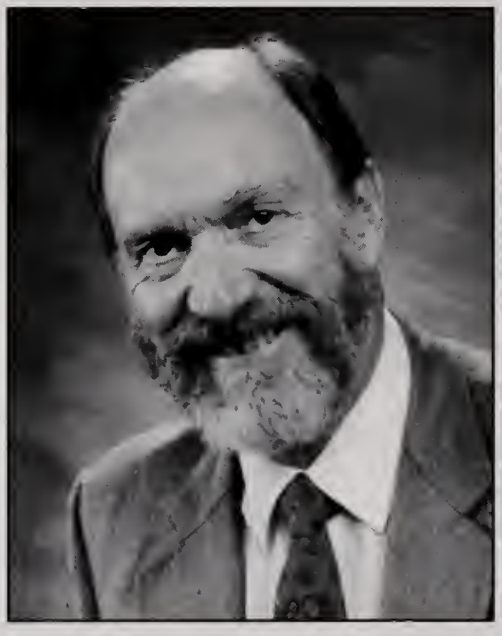
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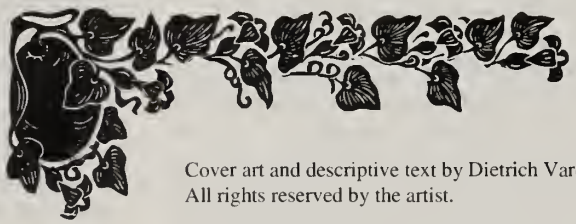
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Menehune Picking Breadfruit

Breadfruit was usually harvested with a long pole. The branches of the breadfruit tree breaks very easily and many have fallen to their death in pursuit of the fruit. Thus comes the Hawaiian admonition that the entrance to the spirit world is from the branch of the breadfruit tree.

Medical miracles start with research

American Heart Association℠
Fighting Heart Disease and Stroke

Editorial

Norman Goldstein MD

This issue of the Journal contains two manuscripts of special interest.

Richard Wasnich, MD, Director of the Hawaii Osteoporosis Center, has long been involved with studies dealing with this major problem in our aging population. He presents the results of one of his projects, a standardized approach to bone density and the interpretation of fracture risk. For further information, contact the Center (800) 592-2626 or the National Osteoporosis Foundation, 1150 17th St NW, Suite 500, Washington DC 20036.

Carolyn Cook Gotay, PhD and her associates at the Cancer Research Center of the University of Hawaii assess the attitudes, behavior and barriers to mammography in the Queen Emma Clinics at the Queen's Medical Center. With only one in six women being compliant with guidelines, it is obvious that much has to be done to educate women about breast cancer and mammography.

Both manuscripts are "eye openers" and must be read.

This month we also start a series of articles written by A.A. "Bud" Smyser, which originally appeared in the Honolulu Star-Bulletin. The popular "Hawaii World" series written by Smyser, former Editor-in-Chief and now contributing editor of the Star-Bulletin served as the impetus for our November special issue on Death with Dignity.

HMA President's Message

Carl W. Lehman MD

RE: AMA/Federation of Medicine Re-organization

At the recent AMA Annual Meeting held in Chicago, a re-organization of the Federation of Medicine was accomplished. The change of organization was done to enable organized medicine to be more relevant to each individual physician and to assist specialty and local medical societies by providing more services effectively and cost efficiently. As I listened to over 10 hours of delibertation, discussing the re-organization of the Federation, I had difficulty conceptionalizing the organization and function of the Federation. Each physician will be sent a registration form to allow him to declare the organization through which he wishes to be represented at the AMA level. This may be through various specialty organizations, but in addition, he will have representation through his State Medical Society. This re-organization will alter the organization of the assembly of the House of Delegates, however, I doubt very much that it is going to significantly alter the discussion of issues. I believe that the process of reconsidering the organization of the Federation of Medicine has influenced many in the thought process of how to better serve and protect the physicians rights to serve their patients adhering to our high standards of professionalism.

The HMA has initiated discussions with AMA personnel to consider carrying on functions in a more cost effective manner than the HMA can perform independently. In my opinion, the AMA, is one of the most democratic organizations in the country. Physicians are well represented at the AMA, however, it is obvious that only a small percentage of the physicians in the country are able to attend a given meeting. The strength and function of the national organizations is certainly different from the state and local levels, but we address similar problems at different levels. Many organizations in the past were determined by the need for smaller units in order to be functional for individual members. Now with changes in modern communication, e.g. the use of the computer Internet and facsimiles, local functions may be done at the national level in a more cost effective manner by sharing the use of a large, complicated system rather than involving multiple small societies throughout the country. For example, this year I have received a number of Congressional Legislative bills by fax from the AMA with important bullet notes to respond to our local Legislators, even providing the phone numbers and addresses. This information allows me to respond in a timely manner to national legislative issues that affect our profession. In the past, communicating by mail would have been so cumbersome and slow that by the time information would have been received at a local level, the issues are likely to have bee acted upon.

The AMA addresses scientific and educational materials, however, specialty societies are also involved with scientific publications. I believe the future of organized medicine must make efforts to utilize the most effective system in communicating information to physicians. The problem being that physicians do not have time to read and digest all the information from every source. It is also the responsibility of our profession to address public health issues, mainly health problems which are prevalent in our society, but are not generally addressed on an individual basis. For example, drug, alcohol and tobacco use, and domestic violence which I will address in more detail in the September issue and organizing to protect the profession against degradation by interference from inappropriate business management and government regulations. Although the problems may become more vast, our ability to share ideas and communicate ideas at great distances are becoming very close.

If organized medicine is to maintain its power and effectiveness, we must consider belonging to organized medicine as an entity, not as various sections. It is unrealistic to believe that we can support the AMA without supporting the state or county organizations. Likewise, it becomes vague as to how one can be represented at the AMA level if he is only a member of the county and state organizations, but not an AMA member. I predict that we will go back to the idea of unity membership, not that one has to belong to 3 organizations or none at all, but rather that the Federation of Medicine will be considered one organization with subdivisions or units to continue to function in a relevant manner. We wish to provide services and relevant activities for all members whether they be starting in the profession at the medical school level, the residency level or in active practice. Furthermore, we wish to address the needs of physicians to properly practice professionally irregardless of the business organization in which they practice. We must protect the freedom of individuality of practice as well as the freedom for patients to choose their preference of medical care. Unfortunately there are mega-organizations in our country today who are willing to take over the control of the practice of medicine. They have the monetary power to do so, but they do not have the professional training to make appropriate decisions about the care of the patient. We must protect that right through our power of unity in organized medicine.

Military Medicine

Military Medicine
Benjamin W. Berg MD

Tripler Graduation

On June 14, 1996 at Tripler Army Medical Center (TAMC) 103 graduates of 18 programs were presented with certificates and congratulations. The keynote speaker was the Commanding General, Brigadier General Warren A. Todd Jr. attending were Major General Steven Silvasy, Acting Commander, US Army Pacific and by the immediate past Commanding General (TAMC), Brigadier General James Hastings, Chief of Medicine, JABSOM. The graduates were represented by the Intern Class president, CPT Christopher Goring, who presented teaching awards and delivered brisk military commands as required during the formal military ceremony.

Brigadier General Todd delivered an address which focused on the future of academic medicine in the U.S. Army, as Military Medicine evolves to embrace the managed care model. Military Medicine has faced the pressures of a shrinking defense budget, with losses of funding and physician staff as the active duty population shrinks. In order to continue to provide quality care to the active duty, dependent and retired population, managed care has been selected as the operational model for cost containment. Eligible patients who receive care outside of the Military facility because of unavailability of services can already enroll in Tricare Prime, the available managed care program which incurs the least out of pocket expense. Brigadier General Todd emphasized to the graduates the similarity of civilian managed care environments and the new Military Medicine environment. He noted the important roles of research and academic medicine in maintaining the quality of health care delivery. The availability of funding for academic programs and research has decreased nationwide, and alternative sources must be explored. Academic Medical Centers (usually University affiliated) cannot continue to function under the traditional teaching model.

Managed Care paradigms of ready access, continuity of care across the inpatient-outpatient spectrum, and least costly settings for care delivery, are in direct conflict with the traditional operation of teaching institutions. Academic centers must then shift operational characteristics (paradigms) if we are to continue to function as education centers. Brigadier General Todd proposed a model for today's successful academic medical center. Five features were noted to be required for success. 1) Practice must reflect the identified population based needs of the community served; 2) Continuity of care across the continuum with housestaff/faculty "firms" will be the rule; 3) Multidisciplinary care teams should be organized in primary care and specialty practices, with coverage for continuity; 4) Prevention, education, early detection, and "self care" will be cornerstones of the new paradigm; and 5) the concept of value must be built into training programs: *Value equals quality times patient satisfaction divided by cost.* Teaching programs will thus provide what the public wants; Providers who take primary responsibility, easy access to useful information and knowledge, and humane relationships with providers.

The graduating class faces an exciting and challenging future in medicine. Of the 54 resident graduates, 6 will participate in Fellowship training. The internship class (44 graduates) will send 33 graduating interns directly into residency training. Others will be assigned in their medical specialty area to Army Hospitals and Clinics. The overseas assignments ranged from Korea to Germany. Others are off to practice in, Texas, Washington State (and DC), Alabama, Kansas, and other sites across the United States. Forty graduates are lucky enough to be staying in Hawaii for the next tour of duty.

The residency programs at Tripler will remain an integral part of the institution. The only casualty of recent budget realignments is the Pathology residency. This loss will be a palpable absence for the practitioners and training programs at Tripler.

Graduating Resident Roster *(number of graduates in each discipline)*

Fellows			
Psychiatry	2	Otorhinolaryngology	2
Pediatrics	1	Pathology	2
Psychology	1	Health Care Admin	2
		Urology	1
Residents		Maxillofacial Surgery	1
Internal Medicine	8	Podiatry	1
Obstetrics/Gynecology	7		
Family Practice	7	**Interns**	
Radiology	6	Transitional	18
General Surgery	4	Internal Medicine	7
Psychiatry	4	Surgery	7
Clinical Psychology	4	Pediatrics	7
Pediatrics	4	Family Practice	7
Orthopedics	3	Psychiatry	4
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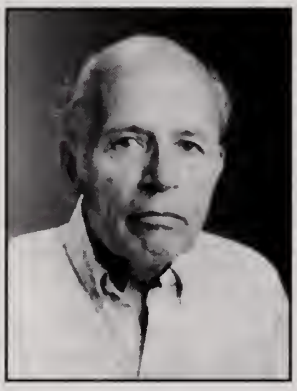
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Assisted Suicide is Gaining Public Support

by A.A. Smyser

Reprinted from the Star-Bulletin 3/9/95, Hawaii's World



Bud Smyser

Dying has come out of the closet. It never will be wildly popular but—after decades of using high tech to extend life without regard for cost or discomfort—death is again being seen as something natural and even to be welcomed.

Terminal patients no longer blindly accept surgery, chemotherapy or radiation when these may be simply dehumanizing, and wasteful of medical effort better directed elsewhere.

I told in a column Tuesday how more and more people with little chance of regaining meaningful lives are seeking "good deaths"—often with the help of hospice teams that emphasize as much comfort as possible and family support even after death.

Beyond expanding hospice care, there are two particular areas where we need more progress: pain control, which should be non-controversial, and assisted suicide. In January, 70 percent of respondents in a national Harris Poll supported assisted suicide.

It remains illegal, however, throughout the U.S. Oregon voters authorized it by 51-49 last November, but court injunctions have delayed its implementation.

In 1992, when he became national president of the American Cancer Society, Dr. Reginald C. Ho of Straub Clinic was influential in getting ACS to adopt a national policy recommending no limit on the use of pain medication except that needed for the particular individual—even in nonterminal cases.

Fears of addiction are overdrawn and simply silly in terminal cases. Once morphine was doled out in doses of only 15 or 20 milligrams every few hours. Now some patients get 500 or more and are still alert.

In 1989 a group of Hawaii nurses took the lead in forming the Hawaii Pain Initiative, based at Queen's Medical Center. They can be contacted for advice and help. So can either of Oahu's two hospices—St. Francis and Hospice Hawaii.

No figures are available but competent people tell me there is still too much undertreated pain in our hospitals and that too many unnecessary treatments are being administered to dying patients. I dared to call this "torture" in a 1981 Star-Bulletin editorial page article.

At a medical society meeting, I defended myself by saying that torture is the infliction of unnecessary pain. Some sufferers still have their hands tied down to keep them from pulling their tubes out. If there were ways to publicize how much abuse still exists, I'm sure it could be further reduced.

Britain's Dame Cicely Saunders, who founded the first modern hospice in 1967, set a goal for hospice care to be so good no patient would want to commit suicide. There do seem to be suffering situation, however, where only a dark, long tunnel looms before the relief of death comes naturally.

The Netherlands permits euthanasia by injection for patients who may be pain-free but still want to die because of such reasons as loss of dignity, mental deterioration, fear of losing control, and unbearable suffering mostly for reasons other than pain.

About 1.8 percent of the kingdom's death occur this way. Another 0.3 percent are helped to assisted suicide from potions, which is all the pending law in Oregon would permit. Several times more Dutch people request help than are granted it. Controls are substantial.

The issue in the U.S. may be decided by a combination of court rulings and state laws. A U.S. Supreme Court resolution of conflicting lower court decision is probable in the next few years. A Washington state federal judge already has ruled in favor, a New York judge against. If the high court doesn't find a national right to assisted death, as it found a national right to abortion, it may at least leave the matter for states to decide.

Then there will be arguments over whether to limit it to only terminal patients, as Oregon's pending law does, or to make it more widely available, under committee review, as proposed by Dr. Sherwin Nuland, author of the current best-selling book, "How We Die."

In Hawaii nearly 7,000 people die every year. We know how to make death kinder in most situations. But the fact that 80 percent of people die in hospitals when 80 percent deaths at home would be closer to ideal tells us we aren't doing well enough.

Don't be afraid to talk back to your physician or even change physicians in the process.

When Doctor's Make Mistakes

A Commentary

S.Y. Tan, MD, JD

Reprinted from the Star-Bulletin 12/17/95

Editor's Note—

Dr S.Y. Tan is uniquely qualified to speak to the 1996 graduating class of our medical school. S.Y. is a superb physician as well as having received his Law degree. He is a Professor of Medicine and Adjunct Professor of Law at the University of Hawaii and he made a mistake, and admitted it.

Dr Tan is also the Governor-elect of the Hawaii Chapter of the American College of Physicians, and served as Guest Editor for our special issue on Medicine, Law and Bioethics (April 1995).

Though he and I disagree on several aspects of End-of-Life decisions,[1] I highly respect this very special Renaissance Man.

Every physician should read and reread his commentary.

The elderly man, accompanied by his wife, awaited his turn to see the doctor in the emergency room. He was short of breath, and he insisted on being hospitalized for treatment. The on-call medical resident dutifully examined the patient, and carefully reviewed his EKG and chest X-ray. He diagnosed congestive heart failure, prescribed a diuretic, and sent the patient home, believing that he could be safely treated as an outpatient. "You're making a mistake, doc, you're making a mistake, doc," the man pleaded, as he was wheeled out of the hospital ER.

The following day, he was found dead at home.

The chief of medicine investigated the case, but was unable to find negligence. The resident had correctly interpreted the test results, and his treatment plans were appropriate. But the patient's parting words "you're making a mistake, doc" will not easily be forgotten. The year was 1973, and I remember the patient well, because I was that medical resident.

I tell this experience to introduce my talk this afternoon, which is entitled "When doctors make mistakes." In the years of training to come, and beyond, perhaps some of my weak words today will help you find faith in our profession, hope in your mistakes, and charity towards our errant colleagues.

To err is human. And despite the notion that doctors are not supposed to make mistakes, the truth is that we do. And often. Fortunately, the vast majority of medical errors cause no serious harm. Studies conducted by Harvard researchers tell us that 4% of hospitalized patients suffer iatrogenic injuries, i.e., injuries caused not by the disease itself, but brought about by the treating doctor or institution. Iatrogenic injuries account for about 500 deaths each day in our hospitals across the nation. 500 deaths—thats more than the fatalities from one jumbo jet crash—every day.

In the intensive care unit, we make an average of 1.7 mistakes per patient per day. To be sure, almost 200 patient-care activities take place daily in the intensive care unit. Still, a 99% level of proficiency, a 1% failure rate, is too high to be tolerated in a hazardous industry. Not even 99.9%. At 99.9%, for example, there would be 2 unsafe plane landings at O'Hare airport each day, and the post-office would lose 16,000 pieces of mail every 60 minutes. And there would be 32,000 bank checks deducted from the wrong bank every hour.

Doctors respond predictably to medical errors. We hide the, and we bury a few of them. Most commonly, doctors deny the mistake, asserting instead that the adverse outcome was caused by the underlying disease rather than medical error. Or they may prove defensive, blaming others for the mistake—the nurse's fault, the hospital's fault, even the patient's fault. But the doctors I wish to draw attention to are the ones who suffer in silence, fearing discovery and publicity, depressed with guilt and fallen esteem over what they perceive to be failed duty. They feel genuine sorrow, but few will share their contrition with the patient or the family. And none will ask them for forgiveness.

Why not? Because society, in conspiracy with the profession, has perpetuated the myth that good doctors do not make mistakes. Voltaire in 1764 compared us to God. "They even partake of divinity", he wrote, "since to preserve and renew is almost as noble as to create." During residency training, your program director will exhort you to strive for perfection; this you must do. But I will also tell you that even as you attempt to avoid all mistakes, you will fail, and you cannot escape making at least a few.

What should you do? I suggest 4 strategies. First, reaffirm your commitment to the goal of the highest standard of care. This you achieve by diligence and study. Second, exchange your mask of infallibility for the robe of humility. Disavow these twin sins of the profession, the sin of mediocrity, and the sin of arrogance. GK Chesterton, the famous English author of the Father Brown short mysteries, call pride "an inordinate love of our own excellence, the king of all vices." Third, you must learn to accept and bear your burden by seeking the supportive love of family, the shared understanding of a trusted friend, and the reassuring warmth of a respected teacher.

Finally, at the risk of startling you, I suggest you inform your patient whenever you have made a mistake. It was Mark Twain who said, "Always do right. This will surprise some people, and astonish the rest." Disclosure is the ethical thing to do. Sorrow and contrition are wasted in solitude; in confession, they rejuvenate. Your patients have the right to know, and they will approve and respect you for your honesty and integrity. It has been said that almost all of our faults are more pardonable than the methods we think up to hide them. Oh, I know that the hospital risk manager and the lawyers will remind you to be silent, lest your disclosure precipitates a malpractice lawsuit. But believe they are wrong. Competent doctors do make mistakes, and our patients will not abandon us when we expose our humanity by disclosing our errors.

To reduce medical errors, the profession badly needs to do its own part. It needs to acknowledge that mistakes abound. Better for the healthcare system to assume that individuals will make mistakes, than to simply rely on them not to. Did you know that during any overseas commercial flight, a human error or instrument malfunction occurs every 4 minutes—yet each event is promptly recognized and corrected. This is the science of systems errors and failures at work. It can help the healthcare industry. Better standardization, task design, checks and

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Barriers to Mammography in a Low Income, Multiethnic Clinic Population

Carolyn Cook Gotay PhD, Brian F. Issell MD, Brenda Y. Hernandez MPH, Seth Serxner PhD, MPH

Breast cancer-related knowledge, attitudes, behaviors and barriers to obtaining a mammogram were assessed in women attending a primary care clinic serving a low-income minority population. Although most women believed in the value of mammograms, fewer than one in six was compliant with guidelines, and there were considerable deficits in knowledge about breast cancer risk. Ethnic and age differences in responses have implications for health program planning.

Introduction

Breast cancer poses a significant threat to the health of the women of Hawaii. During the past five years, breast cancer was the leading malignancy and a major source of cancer-related death in the state. The burden of breast cancer is disproportionate among Hawaii's ethnic groups. Caucasians and Native Hawaiians are at highest risk for being diagnosed with breast cancer; respective age-adjusted breast cancer incidence rates are 133 and 112 per 100,000 population, compared to 59 for Filipinas and 88 for Japanese. Native Hawaiian women are also at greatest risk of dying from the disease, with mortality rates of 38 per 100,000, compared to 30 for Caucasians, 16 for Filipinas, and 14 for Japanese.[1] Breast cancer is more likely to be at a more advanced stage at diagnosis in Native Hawaiians and Filipinas. Among breast cancer patients in Hawaii, 56% of Native Hawaiians and 46% of Filipinas present with regional or advanced disease, compared to 30% of Caucasians and 27% of Japanese.

An effective strategy to diagnose breast cancer at an early, more treatable stage is available: screening asymptomatic women through mammography and clinical breast examination reduces breast cancer mortality and morbidity for women 50 years of age and older.[2] Despite the widespread availability of mammography, many women do not obtain mammograms, especially on a regular basis as recommended in screening guidelines.[3] In particular, women from minority groups and those of low socioeconomic status are less likely to report having been screened.[4-5] Low-income may affect the likelihood of having insurance coverage or the ability to pay for mammograms. Low-income also often co-varies with other variables such as education that may influence screening behaviors. It appears that sociocultural variables may affect mammography participation[6] even after controlling for income.[7]

Although information has been reported on barriers to mammography in some minority groups such as African-Americans[8-9] and Hispanics,[10-11] virtually no data are available with respect to Asians and Pacific Islanders. In addition, few studies in Hawaii have focused on the cancer-related knowledge, attitudes and behaviors among individuals living in poverty. This project addressed these gaps by identifying barriers to obtaining a mammogram in women attending an inner city clinic designed to serve low-income populations in Honolulu.

Methods

Setting.—The study was conducted at an outpatient clinic affiliated with a major hospital which provides primary care and medical specialty services to indigent patients in downtown Honolulu. Interviews were conducted over a one-month period by a female interviewer with a background in health education.

Patient Eligibility.—Women 40 years or older with no past history of breast cancer or recent breast abnormalities were eligible for participation. (At the time this study was conducted, there was agreement among all major national organizations about the advisability of regular screening mammograms for all women aged 40 years and older.)

Procedures.—Patient charts were examined to identify eligible patients on a daily basis. On arrival at the clinic, the patient was asked if she wished to participate in the study. After women agreed to participate and signed the informed consent form, they were asked to complete a written survey which included 40 items. The questionnaire was designed to be self-administered, and it included descriptive information (e.g., marital status, ethnicity, education, employment, income) as well as questions about knowledge, attitudes, and practices related to mammography and breast cancer. Most items were answered using scaled response categories, and questions which had been utilized in previous studies were used wherever possible. An interviewer administered the questionnaire to women who required assistance. After the questionnaire was completed, the women were randomly assigned to an educational intervention; this aspect of the project will not be discussed further here.

Results

Description of the sample.—A total of 98 women participated in the study. No patient who was approached for participation declined to take part. The demographics of the participants can be seen in Table 1. There was a broad age distribution, with the largest proportion (about one-third of the women) between 40 and 49 years

Address for reprints:
Carolyn Cook Gotay PhD
Cancer Research Center of Hawaii
1236 Lauhala Street
Honolulu, HI 96813

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Table1.—Characteristics of the Participants

Demographics	Frequency (%)
Age	
40 - 49	34 (35)
50 - 59	25 (26)
60 - 69	19 (19)
70+	19 (19)
Education	
Less than high school	35 (37)
High school graduate	31 (32)
More than high school	30 (31)
Ethnicity	
Caucasian	37 (38)
Hawaiian/Part Hawaiian	19 (19)
Japanese	8 (8)
Hispanic	7 (7)
Filipino	5 (5)
Chinese	2 (2)
Other Pacific Islander	8 (8)
Mixec/Other	12 (12)
Annual Income	
Less than $10,000	66 (73)
$10,000 - $15,000	9 (10)
More than $15,000	15 (17)
Marital Status	
In marital-type relationship	27 (28)
Not in marital-type relationship	71 (72)

Note: Total number of participants equals 98; in all tables, numbers may be less due to missing data, and total percentage may not equal 100% because of rounding.

Table 2.—Mammogram History by Ethnicity and Age

	Last Mammogram		
	Past 2 yrs N (%)	> 2 yrs ago N (%)	Never/DK* N (%)
Ethnicity			
Caucasian	26 (70)	4 (11)	7 (19)
Hawaiian	6 (32)	5 (26)	8 (42)
Other	25 (63)	3 (8)	12 (30)
Age			
40 - 49	17 (50)	5 (15)	12 (35)
50 - 59	16 (67)	5 (21)	3 (13)
60 +	23 (62)	2 (5)	12 (32)
Overall	57 (59)	12 (13)	27 (28)

*DK indicates women who could not remember when or if they had had a mammogram.

Table 3.—Attitudes Toward Breast Cancer by Ethnicity*

Item	Caucasian N (%)	Hawaiian N (%)	Other N (%)	Overall N (%)
I would rather not know if I had cancer.	2 (5)	1 (6)	8 (20)	11 (12)
At my age, I don't need to worry about breast cancer.	6 (16)	2 (11)	11 (28)	19 (20)
Painful treatment is worth getting if it improves my chances of living longer.	22 (60)	11 (61)	31 (38)	64 (68)
Most women would be afraid to tell their husband of partner they have cancer because it would affect the relationship.	10 (29)	12 (67)	15 (38)	37 (39)
I have doubts about some of the things doctors say that they can do for you once you have cancer.	14 (39)	16 (89)	17 (43)	47 (50)
There is not much a person can do to prevent cancer.	14 (39)	11 (61)	9 (23)	25 (47)
With breast cancer, most women can live a normal life if it is discovered and treated early.	33 (94)	19 (100)	34 (88)	86 (91)

*Table reflects number (%) of women who agreed with each statement on a 3-point scale.

of age. Ethnicity was assessed by self-report, and almost 60% of the participants were either Caucasian or Hawaiian/part Hawaiian, with the remaining women reflecting a wide variety of ethnic backgrounds. Since the other ethnicities comprised too many different groups to be interpretable, ethnic analyses in this paper are based on comparisons between Caucasian and Hawaiian/part Hawaiian women. Consistent with the population targeted by the clinic, two-thirds of the participants reported family incomes of less than $10,000 per year, although almost one-third (31%) had education beyond high school. Only 26% of the women were married or cohabitating with a partner. This figure seems very low when compared to figures for the state as a whole, which report 55% of women 15 years of age and older as married,[12] supporting a link between poverty and a single earner.

Use of mammography.—Table 2 reports the women's past use of mammography as a function of ethnicity and age. It can be seen that while 28% of participants had never had a mammogram, the remaining 72% had had at least one previous mammogram. American Cancer Society guidelines for mammogram frequency (which guide mammography reimbursement in this state) are that all women 40 years of age and older obtain mammograms every one or two years. Based on this criterion, 59% of these women were adherent to these guidelines. Although the numbers of individuals in the different ethnic groups were quite small, there was a significant difference ($X^2(1) = 7.7$, $p < .006$) between Caucasian and Hawaiian women, such that the Hawaiian women were less likely to be adherent to the guidelines. There were no significant differences according to age.

Attitudes towards breast cancer.—Table 3 summarizes participants' attitudes about breast cancer overall and according to ethnicity. Overall, respondents were positive about the value of early detection and treatment of cancer: high proportions agreed that cancer treatment is worth getting, that discovering breast cancer early allows successful treatment, and that it would be preferable to know if they had cancer. Overall, most women were aware that they were at risk for breast cancer; only one in five women believed that her age obviated concern about breast cancer. A diversity of opinion was evident in other areas: on whether women would be afraid to tell their partners if they had cancer, on whether they had doubts about physicians' claims about their ability to treat cancer, and about whether cancer could be prevented.

Ethnic-related differences were seen in a few areas.—Hawaiian women were more likely to agree (67% compared to 29% of Caucasians) that most women would be afraid to tell their partner about their cancer ($X^2(1)=7.1$, $p < .01$); since nearly equal proportions of Hawaiian and Caucasian women were unmarried (84% and 82% respectively), this difference does not derive from marital status and may reflect different cultural patterns of gender relationships. The Hawaiian women also were much more skeptical of what doctors say ($X^2(1) =12.2$, $p < .0005$).

Only one age-related difference was seen, with respect to the statement, "At my age, I don't need to worry about breast cancer." 41% of older women (aged 60 and above) agreed with this statement, compared to 9% of women 40-49 and 4% of women 50-59. This difference was significant ($X^2(2) =15.8$, $p < .0005$).

Perceptions of risk factors.—Table 4 presents findings for the participants' beliefs about breast cancer risk factors. Since findings were very similar across ethnic and age groups, the table presents data for the women as a whole. The risk factors included those which are known scientifically to increase breast cancer risk (e.g., early menses, late menopause) and to have no effect on risk (e.g., smoking cigarettes), as well as some for which a link is currently unclear (e.g., high fat diet, lack of exercise).

Table 4.—Beliefs About Breast Cancer Risk Factors by Ethnicity*

Potential risk Factor	Caucasian N (%)	Hawaiian N (%)	Other N (%)	Overall N (%)
Hawaiian ethnicity	7 (19)	4 (22)	5 (13)	16 (17)
Mother had breast cancer	27 (73)	12 (67)	22 (55)	61 (64)
Sister had breast cancer	21 (58)	10 (55)	15 (38)	46 (48)
Menstrual period began before age 13	8 (22)	1 (6)	2 (5)	11 (12)
Menstrual periods stopped after age 55	4 (11)	5 (28)	7 (18)	16 (17)
Having one's children after age 30	7 (19)	6 (35)	10 (25)	23 (24)
Breastfeeding one's children	4 (11)	2 (11)	2 (5)	9 (9)
Eating a diet high in fat	22 (61)	7 (41)	22 (55)	51 (55)
Lack of regular exercise	13 (36)	7 (41)	21 (52)	41 (43)
Using alcohol	16 (44)	5 (29)	21 (52)	42 (45)
Smoking cigarettes	23 (64)	11 (65)	29 (73)	63 (67)
Taking medications such as estrogens or birth control pills	26 (70)	7 (41)	17 (43)	50 (53)

*Table reflects numbers (%) of women who agreed that each factor "somewhat" or "very much" increases a woman's chances fo getting breast cancer on a 4-point scale (not at all, somewhat, very much, don't know).

Table 4.—Beliefs About Breast Cancer Risk Factors by Ethnicity*

Potential risk Factor	Caucasian N (%)	Hawaiian N (%)	Other N (%)	Overall N (%)
Hawaiian ethnicity	7 (19)	4 (22)	5 (13)	16 (17)
Mother had breast cancer	27 (73)	12 (67)	22 (55)	61 (64)
Sister had breast cancer	21 (58)	10 (55)	15 (38)	46 (48)
Menstrual period began before age 13	8 (22)	1 (6)	2 (5)	11 (12)
Menstrual periods stopped after age 55	4 (11)	5 (28)	7 (18)	16 (17)
Having one's children after age 30	7 (19)	6 (35)	10 (25)	23 (24)
Breastfeeding one's children	4 (11)	2 (11)	2 (5)	9 (9)
Eating a diet high in fat	22 (61)	7 (41)	22 (55)	51 (55)
Lack of regular exercise	13 (36)	7 (41)	21 (52)	41 (43)
Using alcohol	16 (44)	5 (29)	21 (52)	42 (45)
Smoking cigarettes	23 (64)	11 (65)	29 (73)	63 (67)
Taking medications such as estrogens or birth control pills	26 (70)	7 (41)	17 (43)	50 (53)

*Table reflects numbers (%) of women who agreed that each factor "somewhat" or "very much" increases a woman's chances fo getting breast cancer on a 4-point scale (not at all, somewhat, very much, don't know).

Table 5.—Perceived Personal Risk of Breast Cancer

	Likely N (%)	Unlikely N (%)	Don't Know N (%)
Ethnicity			
Caucasian	10 (28)	16 (44)	10 (28)
Hawaiian	8 (42)	4 (21)	7 (37)
Other	5 (12)	19 (45)	18 (43)
Age			
40 - 49	10 (39)	13 (39)	10 (30)
50 - 59	8 (32)	11 (44)	13 (37)
60 +	5 (13)	14 (37)	19 (50)
Overall	23 (24)	39 (40)	35 (36)

It can be seen that there was a large amount of misinformation about cancer risk among the participants. The highest rated risk was smoking (endorsed by two-thirds of the women), a factor which had not been implicated in breast cancer development at the time of this study. Established risk factors such as being Hawaiian, early menstruation, late menopause, and having children at an older age were each recognized by fewer than one woman in four overall. Many women were aware that breast cancer in one's mother was a risk factor, and nearly half overall also knew that having a sister with breast cancer increased risk. A large proportion correctly stated that breast feeding did not increase breast cancer risk. The other factors all reflected a diversity of opinion (as many women agreeing as disagreeing or being unsure), which is appropriate since the scientific literature is equally unclear about whether these factors increase breast cancer risk.

Personal risk of breast cancer.—The respondents were asked how likely they felt it was that they would be diagnosed with breast cancer at some point in their lives. Table 5 indicates the proportions of women who thought they were at high risk for breast cancer by ethnicity and age. It should be noted that considerable numbers of women in all groups responded "don't know": that is, they had not

Table 6.—Concerns About Mammography by Ethnicity*

Concern	Caucasian N (%)	Hawaiian N (%)	Other N (%)	Overall N (%)
I think it is going to hurt	17 (49)	3 (17)	10 (25)	30 (32)
I feel embarrassed about having a mammogram	10 (29)	3 (17)	11 (29)	24 (27)
I am worried that breast cancer will be found	18 (51)	12 (67)	17 (43)	47 (51)
I am concerned about getting too much radiation	10 (28)	7 (38)	17 (43)	24 (37)
I think this is a very good way to find breast cancer	32 (89)	16 (84)	30 (76)	78 (82)

*Table reflects numbers (%) of women who agreed "some" or "very much" on a 4-point scale of agreement (not at all, some, very much, don't know).

Table 7.—Concerns About Mammography by Age*

Concern	40-49 N (%)	50-59 N (%)	60+ N (%)	Overall N (%)
I think it is going to hurt	13 (39)	8 (37)	8 (18)	29 (32)
I feel embarrassed about having a mammogram	10 (31)	7 (32)	6 (16)	23 (25)
I am worried that breast cancer will be found	19 (58)	12 (55)	15 (41)	47 (51)
I am concerned about getting too much radiation	17 (52)	7 (32)	9 (24)	33 (36)
I think this is a very good way to find breast cancer	29 (88)	21 (88)	27 (73)	77 (84)

*Table reflects numbers (%) of women who agreed "some" or "very much" on a 4-point scale of agreement (not at all, some, very much, don't know).

been able to determine their personal risk for breast cancer. There was a trend toward significance by ethnicity, such that Hawaiian women were more likely to believe they had a likelihood of contracting breast cancer ($X^2(1) = 2.6$, $p = .11$). While older women (60 and older) tended to believe that they were unlikely to get breast cancer (reported by 74% of the women) compared to the younger women (of whom 57% believed breast cancer unlikely), this difference was not statistically significant.

Barriers to mammography.—The women were asked to identify the most important reason why women do not get mammograms. The most frequent response was "fear of mammograms," named by 26 respondents. 16 respondents cited not thinking a mammogram is needed, 11 high cost, 7 that the physician did not recommend a mammogram, and 6 the fear that it would hurt. A number of other responses were suggested by smaller numbers of women, and a considerable number (N=15) could not offer a reason.

The women also asked about a number of specific concerns they might have about getting a mammogram. Tables 6 and 7 summarizes the women's responses as linked with ethnicity and age, respectively. All of the mammography concerns were endorsed by a number of women, with the fear that cancer might be detected on the mammogram the most prevalent across all groups. Overall, the respondents were quite positive about the usefulness of mammograms in detecting breast cancer, with 73% or more in all groups agreeing that they were a good way to detect breast cancer.

With respect to ethnicity, Hawaiian women were particularly likely to report worry that the mammogram could indicate cancer; two thirds of these women endorsed this concern. In contrast, the Hawaiian women were less concerned about the painfulness of the procedure or feeling embarrassed. With respect to age, it is noteworthy that the older women (those 60 years and older) reported the lowest levels of concern in every area about which they were asked. Although nearly three-quarters of these women endorsed the value of mammograms, this was the lowest percentage in any group.

Discussion

Limitations.—Several limitations to this study should be mentioned. The sample size is small, especially in subgroups, and limits the statistical power to detect differences. Only patients who could understand English and were at least somewhat literate were included in the study; however, numerous patients speaking other languages (most frequently, Samoan, Tongan, and Korean) attended this clinic, as well as illiterate individuals. The findings cannot be extrapolated to these groups. The data were gathered from one clinic at a particular time and may not be applicable to other settings. Finally, all data are based on self-reports, which are subject to biases due to social desirability, limitations in memory, and so on. Participants were encouraged to be completely candid, and the large numbers of "don't know" responses in almost every question imply that they were not highly concerned about self-presentation; however, the limitations of self-reports must be acknowledged.

Use of mammography.—In Hawaii, the Behavioral Risk Factor Surveillance Survey (BRFSS), which is conducted annually by the State Department of Health through a contract with the Centers for Disease Control and Prevention, provides a state-specific estimate of mammography use. Data in this survey are collected from a representative sample of the population through telephone interviews. The most recent data indicate that 82% of respondents 45 and older report ever having had a mammogram.[13] The self-reported rates of mammography use in this sample (72 % of participants had had at least one mammogram) are reasonably close to what has been reported for the state as a whole, although the women in this study represented a group which had significantly lower income than the state average and a slightly different age group (40 and above). Thus, it appears that in Hawaii, low-income is not necessarily as great a barrier to receiving a mammogram as has been reported elsewhere in the country;[5] this may result from the widespread availability of health care insurance coverage in the state.

Knowledge and attitudes about breast cancer and mammography.—Most women reported positive attitudes towards breast cancer treatment and mammograms. However, the generally low levels of belief that cancer in general can be prevented, as well as little understanding of breast cancer risk factors, indicate areas where health education efforts are needed. Such efforts need to identify both factors which are not linked with cancer as well as those that are, in order to countermand the frequently-stated belief that "everything causes cancer." The most frequent reason women offered for why they do not get mammograms—a general fear of the procedure —may stem largely from a more basic fear of cancer. The question about women's mammography-related concerns also indicated that many respondents harbored worries that a mammogram would detect cancer. In order to address this barrier, health care personnel need to stress that the vast majority of screening mammograms in asymptomatic women do not indicate cancer or any abnormalities.

Subgroup differences.—Despite the small sample size, several

interesting subgroup differences emerged. The responses of the Hawaiian women differed from those of the Caucasian women in a number of respects. For one, they were more distrustful of physicians. Their lower levels of adherence to mammography guidelines may be partially due to distrust with the standard Western health care system. This finding is consistent with another article recently reported in the *Hawaii Medical Journal*[14] and indicates that health care providers need to make special efforts to communicate with Native Hawaiian patients. Innovative strategies to reach Native Hawaiians are needed as well, such as the approach used by Waianae Coast Comprehensive Health Center's mammography and Pap test screening project. This community-based project utilized lay health educators, natural social networks, and procedures and materials that incorporated Hawaiian cultural values.[15] Hawaiian women in the present study were also less likely to believe that male partners would be supportive, implying that educational efforts may be needed for family members as well as for the women themselves.

The Hawaiian women were markedly more concerned about the possibility of being diagnosed with breast cancer than were the Caucasian women, even though current Hawaii incidence figures indicate higher breast cancer rates for Caucasians. The Hawaiian women's perceptions may stem from the many reports of significant health problems in the Native Hawaiian community, as well as the significantly higher breast cancer mortality experienced by Native Hawaiian women. Such concern can potentially have a positive effect, if the women become mobilized to adhere to healthy lifestyles and recommended preventive care. On the other hand, if women perceive that they are destined to become ill, they may give up attempting to adopt and maintain healthful behaviors. Health care providers and educators need to convey a message that balances valid concerns with realistic hopes and positive, achievable actions.

The older women presented, if anything, the opposite picture. Older women were more likely to believe that they did not need to be concerned about breast cancer at their age and that they were unlikely to be diagnosed with breast cancer during their lifetime. Other studies have also reported lower levels of perceived breast cancer risk in elderly women.[16-18] The older women were also less concerned about all aspects of mammography, including the possibility that cancer would be detected. Their lower levels of concern run directly counter to breast cancer incidence, which rises with age. This fact may get lost in mass media coverage of breast cancer, which often focuses on younger women in the public eye. These findings strongly suggest that efforts aimed at breast cancer education for older women are needed. Several programs designed to enhance breast screening in older women have been reported: strategies targeting individuals (e.g., telephone counseling and letters), the health care system (e.g., using a nurse practitioner to encourage mammography) and environmental barriers (e.g., reduced-price screening, mobile vans) have all been successful in increasing mammography utilization.[19] However, little research has been directed at older impoverished minority women like many of the participants in this study. These women are multiply disadvantaged and their needs warrant particular attention, especially since their numbers will increase in the future.

Implications

This study documented considerable need for breast cancer education and screening among attendees at an urban primary care clinic. It also indicated that screening programs must be sensitive to individual patient characteristics, such as ethnicity and age. The clinic attendees were interested and willing to participate in the study, and future activities could profitably utilize the clinic as a setting for health education.

Observations

For many low-income, minority women, such clinics may be their predominant and perhaps only contact with the health care system. A number of approaches have been used to promote screening in primary care settings; the most frequently-used interventions include physician reminder systems (e.g., chart tags, computerized reminders, checklists) and patient reminders (e.g., postcards, telephone calls).[20]

Although only a few studies to date have utilized social support and social network interventions,[19] such approaches hold considerable promise. The Waianae project mentioned earlier represents one such program.[15] Another example is the "Tell A Friend" program, in which women contacted their friends to encourage them to obtain a mammogram. This program was particularly effective among lower income participants.[21] The "Witness" program, based in Arkansas, recruits participants to cancer screening using community women from the target population who have obtained screening and can share their experience, rather than health care professionals. The similarity between the person providing the health education (the "Witness") and the target audience has proved successful in convincing minority, low-income women to obtain cancer screening.[22] Interventions using models such as these could be adapted to the clinic setting. They may be particularly appropriate for women like the participants in the present study, given the importance of social ties in Native Hawaiian and other cultures, as well as feelings of discomfort and alienation towards the modern Western health care system in many minority and low-income individuals.[14] Future researchers and program planners need to build on these ideas.

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A New, Standardized Approach to Fracture Risk Interpretation

Richard D. Wasnich MD

Screening for osteoporosis has been hampered by the absence of a standard approach to the interpretation of bone density and other risk factors. A consensus conference of international experts has now recommended a report which is based upon two concepts: (1) comparison of an individual's bone density to the mean value for 30 year old women, and (2) estimation of Remaining Lifetime Fracture Probability (RLFP), based upon current age and bone density, life expectancy, future bone loss, and other risk factors. This model is dynamic and can be perfected as new risk factors become established. It also allows for estimation of therapeutic impact, and thus improves and individualizes clinical decision making.

Despite the substantial body of evidence linking bone density to future fracture risk, few successful osteoporosis screening programs have been implemented. This can be attributed to two obstacles:

1. The dearth of treatment options
2. The absence of a standardized interpretation of bone density and fracture risk

With the availability of the bisphosphonate class of drugs, and the future potential of estrogen analogues, the first obstacle has been overcome. However, the second obstacle remains. A woman having spinal bone density measured in Honolulu might receive an entirely different report and interpretation if her hip bone density were measured in New York. There has been no consensus regarding which levels of bone density should be considered "treatment thresholds."

To address this important issue, a Consensus Conference of international experts convened in Chantilly, Virginia in April, 1994.[1] In order to understand the conclusions of the consensus panel, some background is helpful.

Richard D. Wasnich, M.D.
Hawaii Osteoporosis Center
401 Kamakee Street, 2nd Floor
Honolulu, Hawaii 96814
Phone: 808-592-2643
Fax: 808-592-2638

Bone mass (or density) is clinically useful for one reason; it is a strong risk factor for osteoporotic fractures. It could also be argued that bone density measurements are clinically useless unless they influence the management of individual patients. The greatest, potential application of bone density is in patients *without* fractures, but who are *at risk* for fractures. Since such patients have no symptoms, and since there are usually no signs or other risk factors that can successfully identify individual patients who are at risk, there is a great clinical need for a practical way in which to identify such patients. Otherwise pharmacologic agents, including estrogen and especially anti-resorptive drugs, cannot be selectively prescribed for those with the greatest need.

If bone density measurements are to successfully fulfill this need, then they must indicate to the physician how to manage the individual patient. If the patient is a 50-year-old woman, for example, the question to be answered is: Should this patient receive pharmacologic agents, or is only life-style advice required?

Bone density is the only known risk factor which has the potential to answer this question. However a report stating that a patient has a *normal* spine BMD of 1.0 gm/cm^2 does not answer the referring physician's question. Thus there is a need to develop a consensus on how to provide a *useful, clinical* interpretation of bone mass measurements.

Etiologic Risk Factors Versus Clinical Risk Indicators

In order to understand the clinical use of bone density, it is helpful to discuss risk factors in general. Risk factors have two possible uses:

1. To search for disease etiology.
2. To clinically identify individuals at greatest risk of disease.

An example of an etiologic risk factor is smoking (for lung cancer). In addition to explaining etiology, there are obvious public health implications. On the other hand, smoking does not *diagnose* lung cancer, even though it may raise the clinical suspicion.

There are some risk factors that are sufficiently strong that they might be termed *clinical risk indicators*.[1] The relationship of blood pressure to cardiovascular and stroke risk is sufficiently strong that the blood pressure measurement itself becomes an indication for treatment. However, hypertension is not the only risk factor for stroke. Likewise, bone mass is not the only risk factor for fracture.

The problem is this: How can these fracture risk data be applied to clinical practice? It is certainly not intuitively apparent to the clinician what a lumbar spine bone density of 1.0 gm/cm^2 means for a 50-year-old patient. A variety of different interpretations have been employed in the past. Before discussing each of these, the consensus panel first discussed the requirements that an interpretation should fulfill:

1. It should convey the fact that peak bone mass is as relevant as is bone loss in determining lifetime fracture risk.

Table 1.—The influence of age, initial BMD, and treatment upon future fracture possiblility (NFP=number of fractures prevented; CFP=cost per fracture prevented).

Initial BMD	Initial Age	RLFP (untreated)	90% Reduction in Loss Rate NFP	CFP
510	50	0.46	0.38	17700
	80	0.07	0.03	62050
360	50	2.50	1.98	3400
	80	0.49	0.19	9650
290	50	5.00	3.75	1800
	80	1.11	0.39	4500

2. It should illustrate how the individual compares to healthy, young individuals of the same sex. For this purpose, the mean bone density of healthy, 30-year-old women is considered the standard of reference.
3. It should be intuitively apparent to both physician and patient.
4. It should provide an indication of absolute fracture risk.
5. It should estimate cumulative fracture risk over the patient's (estimated) remaining lifetime.
6. It should give the physician an objective basis upon which to make therapeutic decisions. It should address this question: "Will this patient benefit from pharmacologic treatment?"
7. It should also provide an estimate of therapeutic impact upon fracture probability.
8. It should be adaptable to include risk factors other than bone mass.
9. It should be sufficiently generic that various measurement techniques and sites can be employed.
10. Since there are data indicating that density measurements at various skeletal sites may contain independent predictive value for fractures, our interpretation should be able to incorporate all available information. Thus if two bone density measurements are available, both should be used, rather than arbitrarily discarding one value in favor of another.

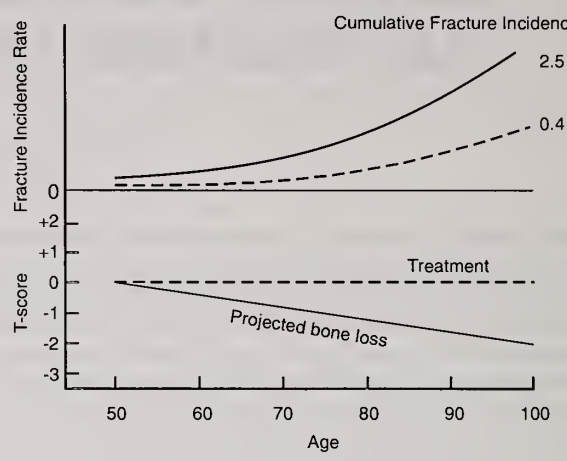
Based upon these criteria, the consensus panel agreed upon the following approach to fracture risk interpretation (Fig 1).

Based upon prior recommendations of the World Health Organization, bone density values between - 1.0 and -2.5SD are considered osteopenic, and bone density values more than -2.5SD are osteoporotic. If the patient also has a history of nonviolent fracture, she is classified as having *severe osteoporosis*. Although these classifications provide a useful cross-sectional description, they are insufficient for clinical decision making because they ignore age (and therefore future years of bone loss and risk exposure).

Therefore the consensus panel adopted the concept of Remaining Lifetime Fracture Probability (RLFP). Although the mathematical modeling involved is complex, the concept is simple, as illustrated in Fig 2. For purposes of discussion, assume that we are evaluating a 50-year-old female, (Pt. "A" in Fig. 2). Her current bone density is 0.95 SD below the mean for 30-year-olds; thus she has a *T-score* of -0.95. Based upon life tables, we estimate that her life expectancy is an additional 32 years. We will assume that, on average, she will lose bone density at the rate of 1.5% per year over 32 years; if serial bone density measurements are available, this figure can be appropriately adjusted for the individual.

Based upon data from published studies relating fracture rates to levels of bone mass/density, a fracture incidence rate can be assigned to each age and bone density value. For example, our 50-year-old patient with an initial heel value of 360 mg/cm^2 has a 0.5% probability of a fracture (at any skeletal site) during the next year.

Fig 1.—Each age and BMD level is associated with a fracture incidence rate; the cumulative total of these rates represents cumulative fracture incidence (Remaining Lifetime Fracture Probability).



Each subsequent year, this rate increases as bone density declines. RLFP is nothing more than the sum of all these rates over an estimated remaining lifetime of 32 years. Thus this patient has an estimated RLFP of 2.7, meaning that, on average, women like her will experience 2.7 fractures in their remaining lifetime. This number is, of course, associated with an error; some such individuals will have more, and some will have fewer, fractures. Figure 2 also illustrates why bone density alone is not sufficient to make clinical decisions. Patient B, who is 75 years old, has a T-score very similar to Patient A, at-1.1. According to WHO guidelines, she is *osteopenic,* whereas Patient A is *normal.* However Patient B has an RLFP of only 0.5 (because of her shorter life expectancy), and a treatment that stops bone loss would only lower her RLFP to 0.3. Patient A, on the other hand, has an RLFP of 2.7, which could be substantially lowered to 0.3 with treatment. Thus the "normal" patient will receive much more benefit from pharmacologic treatment than will the older, "osteopenic" patient.

Although many fracture risk factors appear to be mediated via bone mass, not all fracture risk factors are expressed, or mediated, via bone mass. Falls, previous fractures, and perhaps age are independently associated with fracture risk. Nevertheless, bone mass is the most *clinically* useful of these indicators, for several reasons. Although falls in the elderly have shown an association with fracture, independent of bone mass, most fractures still occur in patients with low bone mass. Also, the decision to preserve bone mass should occur at much earlier ages, when the tendency to fall is not yet apparent. Finally, preservation of bone mass is likely to prevent many fractures even if falls cannot be completely eliminated. Age has also been associated with fracture risk, but of course age itself is not modifiable. In any case, age is probably serving as a surrogate for some other age-related factor.

Bone density is clinically useful because it represents a composite and cumulative index of many other risk factors, both past and present, including both genetic and life-style influences. Bone mass frequently is a measurable expression of unknown, or unmeasurable, risk factors. For example, adolescent nutrition and physical activity may exert a strong influence upon attainment of peak bone mass, but it may be difficult, or impossible, to retrospectively estimate in a 50-year-old patient.

It is not the purpose of this paper to review the data relating bone mass to fracture risk. A number of studies have now shown that

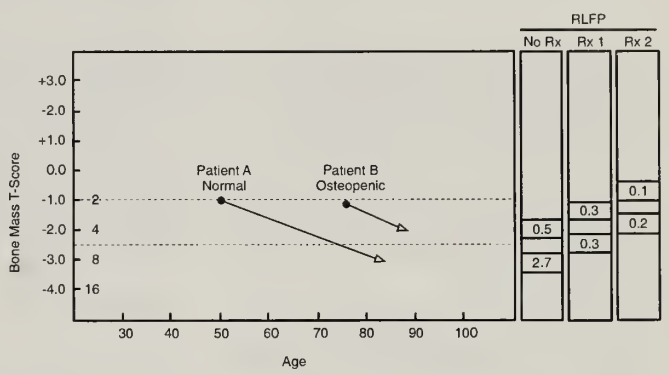
fracture risk increases progressively, and approximately exponentially, with decreasing levels of bone mass or density.[3-5] Thus women with bone mass equal to the mean, one standard deviation (SD) below the mean, and two SDs below the mean, have two, four, and eight times greater risk, as compared to women with bone mass one SD above the mean.

RLFP thus addresses the need for a *cumulative* estimate of *absolute* fracture risk. It can also be applied to any bone density measurement for which fracture incidence data are available. However, the real advantage of the RLFP concept is the ability to estimate the impact of therapeutic intervention. Although knowing that this patient might experience fractures is more useful than knowing that her BMD is *normal*, it still does not tell the clinician what he or she most needs to know. Namely, can this risk be significantly lowered if pharmacologic treatment is prescribed? For example, if an anti-resorptive drug is prescribed, what is the impact upon fracture probability?

For the 50-year-old, an hypothetical, anti-resorptive drug that stops bone loss would reduce her RLFP from 2.7 to 0.3 (potentially preventing two fractures). However the 75-year-old, even if she achieves the same prevention of bone loss, only reduces her RLFP from 0.5 to 0.3 (preventing only 0.2 fractures). Because she has fewer years of future bone loss and risk exposure, there is less opportunity to reduce bone loss and fracture risk. Therefore, the older women may receive greater benefit from non-pharmacologic measures, such as calcium and Vitamin D supplementation, physical activity regimens, and possibly measures to reduce the risk of falls. The new treatments now becoming available are considerably more efficacious. The average patient might gain 8-10% bone density in the first three years of treatment, which translates into a 50% reduction in fracture risk . Thus treatment of older patients, like the 75 year-old mentioned above, becomes cost-effective, particularly if the treatment has a good safety profile.

A final, potential use of the RLFP model is to estimate cost-effectiveness of various treatment programs, shown in Table 1. If the cost of estrogen replacement is $225 per year, and treatment continues indefinitely, *the cost per fracture-prevented* can be estimated. Surprisingly, these estimates suggest that pharmacologic treatments to reduce bone loss may be cost-effective even for women in their 70's, particularly for those at high fracture risk. Also new treatments that are either more potent, or which have a longer duration of action, could substantially improve the cost-effectiveness of treating the older woman. Although the reported bone mass increases from anti-resorptive agents typically plateau after 2-3 years of treatment, women who maintain such an increase might have a much greater therapeutic benefit. For example, if the 50-year-old woman described above, with an initial bone density of 360 mg/cm^2 and an RLFP of 2.7, experiences a 8% gain in bone density which is subsequently maintained, it could translate into a new RLFP of 0.2.

Fig 2.—Standardized approach to bone density and fracture risk interpretation recommended by the Consensus Panel (1). Two patients with similar bone density, but different fracture probabilities. The y-axis compares the measured value to the average for 30 year old women. The arrow extends to mean life expectancy, and shows expected future bone loss. The younger patient has more future bone loss and risk exposure than the older patient, and may therefore receive greater therapeutic benefit. Treatment I assumes complete prevention of bone loss. Treatment 2 assumes a 10% increase in bone density.



In conclusion, a standardized approach to bone density and fracture risk interpretation is now available. Its use is expected to facilitate improved clinical decision-making, and to allow for individualized decisions for each patient.

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Council Highlights

July 13, 1996
Roger Kimura MD, Secretary

The meeting was called to order by Dr Carl Lehman, President at 1:00 pm.

Those present were J. Spangler, President-elect, R. Kimura, Secretary; L. Howard, Treasurer; AMA Delegate: C. Kam AMA Alternate Delegate: A. Kunimoto; Speaker: H.K.W. Chinn; County Presidents: E. Bade, Hawaii; M. Joshi, Maui; T. Crane, Kauai; Councilors: T. Au, D. Canete, P. Chinn, W. Dang, Jr., P. Demare, M. Shirasu, K. Thorburn, W. Young, J. Betwee, P. Kim, C. Kadooka, A. Bairos; Past Presidents: W. Chang, A. Don, J. McDonnell; Medical Student Section: J. Ing, Young Physician Section: C. Goto; HMA Alliance Members: C. Gutteling, C. Lehman, V. Lau, S. Robinson, and J. Chuang.

HMA Staff: J. Won, N. Jones, B. Kendro, J. Asato, and L. Tong, Recording Secretary, A. Rogness.

Minutes: The minutes of the June 7, 1996 meeting were approved as circulated.

• Dr Lehman reported: 1) He attended the AMA Annual meeting which was well attended and very informative. Dr Holschuh did a wonderful job presenting HMA's resolutions. There were over 195 resolutions and 85 reports. The HMA officers met with AMA's Strategic Planner, Bruce Balfe on two occasions. Mr. Balfe will come to Hawaii in August and meet with a group of physicians from HMA to help analyze and assist HMA on its short-term and long-term plans; 2) the Gang of Six met this week and discussed legislative issues; 3) he is Chair of the Medical-Legal Committee on the Hawaii Health Council who is considering the presentation of a two-hour course on alternative dispute resolution in health care sometime in November; 4) he attended the HPPA meeting July 12; Dr Don reported that since HMA will not be able to fund the project, PMAG will also not fund it. There is still interest from the members and they are looking at the resources that HMA has (Peer Review, etc.) currently in order to set up an MSO with minimal funding.

• Mrs Gutteling of the HMA Alliance reported that they cherish the social functions they have been involved in with the HMA and thanked Dr Lehman for his support. The Alliance has made an impact through health care and advocacy programs. The Alliance will meet with the HMA Executive Committee to discuss some concerns they have about social functions and their role in the HMA. Mrs Lehman attended the AMA meeting in Chicago as an Alliance Delegate and stated it was a very positive meeting. Suggestions were given on increasing membership and having a Domestic Abuse shelter shower. Another suggestion was to sell bags or boxes promoting antiviolence at shopping malls, etc. Mrs. Lehman thanked the HMA for the opportunity to attend the AMA meeting.

For Action

The following actions were taken by the Council—

• Approved the Finance and Executive Committee recommendations for allocating funds as follows:

$5000 to meet the request of the HCMS for a reduction in its contract for services with HMA.

$3,500 to fund the original 1996 budget allotment for the HMA Alliance.

$5,000 be restored to the salaries budget line item for a receptionist.

$2,500 be added to the Retirement budget line item.

$4,000 be restored to the meetings budget item for meals with rules for the meals.

• Approved Dr Walter Shim's request to attend the next Council meeting to discuss some ideas that would be beneficial to the HMA and the Symphony. Council asked the HCMS Membership Committee to consider a recommendation for honorary membership for Dr Wong.

• Asked the Executive Committee to look into the focus of the HMSA Managed Care Conference.

• Asked Drs Andrew Don and Frederick C. Holschuh to remain on the QUEST Advisory Board as HMA's representatives.

• Approved the Annual Meeting Committee recommendation to hold the 1997 Annual meeting at the Hilton Waikoloa Village, Island of Hawaii from October 23-26/97.

• Approved the Memberships Benefits Committee recommendations of the FOLI Program and UNUM Long Term Care Insurance Program as benefits for HMA members. Requested the Benefits Committee to obtain more information on the Physician Fund benefit as follows: 1) contact other insurance companies in various states who have participated in this program and find out how it is working; 2) look at HMA's liability, if any.

• Directed a letter be sent to Dr Chris Gulbrandsen, Dean, Medical School, requesting support for resident's coverage to allow attendance at the HMA Annual Meeting.

Component Society Reports

Honolulu.—Dr W. Dang, Jr. reported that the HCMS Nominating Committee is seeking names for the elections in October; will revise the bylaws; and has adopted a revised budget similar to that of the HMA.

West Hawaii.—No report.

Hawaii.—Dr Bade reported that their County had regular monthly meetings. The Alliance has been promoting the children's books by Dr Matsuura to raise funds for the AMA-ERF.

Maui.—Dr Joshi reported that Maui County will be having meetings on health care fraud with speaker Kurt Butler and on the Tamoxifin Studies.

Kauai.—Dr Crane reported that their County had a meeting on the West side of the island in an attempt to recruit more members from that area.

For Information

CIVS.—Mr Won reported that the HMA should be making appointments with the hospitals next week to market the CIVS.

Tobacco Task Force.—The committee will be contacting Commander Todd of Tripler to assist in curbing the sale of cigarettes to the military who resell them at a higher rates to the public. The committee is considering legislation which will require people who look under 30 to show an I.D. when buying cigarettes the same as for alcohol purchases.

HMA/AMA Mutual Help Discussion.—David Cloud of the AMA met with the HMA Executive Committee regarding developing a mutual working relationship between the AMA and HMA. The AMA can help state associations with staff support/their expertise and state associations can help the AMA with things state associations are better at doing.

AMA Fraud & Abuse Win.—Dr Lehman reported that the language of HR 3103 has been changed and that physicians would have to be knowingly and intentionally abusing the system in order for it to be a crime.

Council Meetings.—Council meetings will continue to be held on Fridays until the Annual Meeting. The next meeting is scheduled for August 2 and the following meeting will be held on September 13 (budget session)

The meeting was adjourned at 3:20 p.m.

News and Notes Henry N. Yokoyama MD

Life in These Parts

Genetic Cause for Hip Problems

A Five year UH study of hip replacement rates in Hawaii reveals that osteoporosis of hips is genetic with Caucasians highest and Japanese lowest.

Caucasians	12.8
Chinese	5.1
Koreans	4.2
Filipinos	2.7
Afro-Americans	2.4
Hispanics	2.2
Japanese	1.9

The study was begun by **Calvin Oishi, Franklin** Hoagland (UCSF orthopedics chief) and coauthored by **Philip Ross and Larry Gordon.** Included in the study were 754 patients (or approximately 90% of total hips in Hawaii) between 1985 and 1989.

Assisted Suicide

St. Francis Medical Center recently sponsored an International Bioethics Conference. **Alexander Capron** co-director of USC's Pacific Center for Health Policy and Ethics, feels that physicians continue treatment because of "an enormous and totally goundless fear of lawsuits." **Albert Jansen**, chairman Dept. of Medical History and Ethics, University of Washington Medical School said, "The issue is 2,000 years old. Today the point is to give people the right, based on autonomy and freedom, to end their own lives." **Christine Mitchell** (leading nurse in bioethics) with Children's Hospital and Harvard Medical School said, "Euthanasia is being reexamined because prolonged life has resulted in more suffering and undignified death."

S.Y. Tan, chairman of St. Francis hospital's Ethics committee reported that 2,500 Hawaii physicians were surveyed on euthanasia. "The first 500 responses indicated few physicians favored assisted suicide. The majority would respect wishes to withdraw treatment and allow natural death. A minority would go further and approve physician involvement. Even a smaller percent would do it themselves." S.Y. Tan says, "The medical profession sometimes ignores patients' wishes regarding treatment at the end of their lives. The unwillingness to listen comes from equating death with clinical death so they treat patients at all costs. It's war against disease and disease something to defeat and to conquer."

Elected, Appointed and Honored

Ruth Matsuura, Hilo pediatrician for more than 22 years was recently awarded the Hawaii County Medical Society Physician of the Year Award. Ruth is most noted as an effective and articulate advocate for prevention of child abuse.

Cardiologist **Danelo Canete** was appointed in January as the new medical director of the Heart Center at St. Francis Medical Center.

Physician Moves

Nephrologist-Internist **Hesun Hau** joined the partnership of Richard Shim, Aaron Nada and David Ono with offices at 1520 Liliha Street, Suite 302, and branch offices at Kailua Professional Bldg. I, Pali Momi Medical Center, Suite 420, St. Francis Medical Center-West on the Big Island, Kauai and Maui.

General surgeon **Francis Oda** retired as of January 1. **Benjamin Tom and Mari Nakashizuka** assumed his practice.

General surgeon **Gene Robinson** opened his offices at Kapiolani Medical Center POB, Suite 904 and KMC at Pali Momi, Suite 140.

Cardiac surgeon **Richard Mamiya** retired from his surgical practice to devote full time to his new endeavor.

Cardiologist **Kazuo Misumi** joined the Cardiology Associates Inc. (Masahori Mori, William Dang Jr., and Samuel Dacanay) with offices at KMC Pali Momi, Suite 200, Queen's POB II, Suite 409, Wahiawa General hospital, Kilani Clinic and St. Francis-West Medical Plaza.

Opthalmologist **Anthony Martyak** joined Straub Quality Care and will be available at Straub's Pali Momi, Kailua and Hawaii Kai offices. Pediatrician **Richard Ho** retired effective March 1 and **Darrell Natori** assumed his practice at 1380 Lusitana Street, Suite 501.

Pediatric surgeon **Y.C. Huang** opened his office at 615 Piikoi St., Ph. No. 4 and St. Francis West Medical Bldg., Suite 208.

Dermatologist **Randall Nita** closed his office at Kuakini Medical Plaza and transferred his records to Jan Mitsunaga at Queens POB II.

Kristi Adachi, otolaryngologist and head and neck surgeon opened her office at Kapiolani Medical Center, Pali Momi Medical Office, Suite 482.

Neurosurgeon **William Won** retired effective April 30. His medical records will be transferred to Maxwell Urata at Kuakini Medical Plaza and to William Obana at Queens POB I.

Conference Notes

Controlling Lipids in Type II

Lecture by VP Daniel Rader from the University of Pennsylvania Medical School, at QMC-UH, February 16, 1996.

Background

Scandinavian survival study
- 42% less CAD mortality
- 32% less total mortality

West of Scotland Coronary Prevention Study
(Provastatin 40 mg/d in patients with elevated cholesterol and no MI):
- 36% less non-fatal MI
- No rise in non-cardiovascular deaths
- 22% less total mortality

General Discussion

- Lipid lowering changes the plaque itself i.e. treatment modifies the lesion.
- Diabetics have macrovascular lesions because of elevated chylomicrons, LDL, triglyceride and low HDL.

* *Metformin*
- Synergistic with sulfonureas
- Lowers triglyceride
- Side effects: diarrhea, and lactic acidosis
- Avoid use in serum creatinine over 1.4 and liver dysfunction.

Treatment based on LDL levels

	Level	Goal
c CHD	≥ 130	< 100
c 2 risk factors	≥ 190	< 160

Diabetic Dyslipidemia
- Bile Acids—raise Triglyceride
- Niacin—not good for DM esp Type II
- "Statins"—first line therapy for Type II
 Mevacor
 * Provastatin (**drugs of choice*)
 * Zocor (Simvastatin)
 Les Col

Triglyceride Levels
- Normal—less than 200
- Moderately high—200 to 400
- High—400 to 1000
- Very High—over 1000

Treatment of Triglyceridemia
- Diet and physical activity
- Drug Therapy
 Fibrous Acid—
 Lopid and Fenofibrate (available in Europe)
 Nicotinic Acid
 Fish Oils
 Metformin esp in NIDDM

* Lopid (Gemfibrozil)
- Stimulates hydrolysis of triglycerides but raises LDL and total cholesterol. Therefore combination with "Statins" indicated.

Combination Therapy
- Lopid with Mevacor

May raise CPK (myopathy); severe myopathy e.g. CPK over 10,000 can cause acute renal failure.

* Incidence of myopathy with Mevacor
Lopid with Mevacor 5%, Niacin with Mevacor 2% and Cyclosporin with Mevacor 30%.
- Lopid with Provastatin

No cases of myopathy, low incidence adverse effects, lowers total cholesterol, lowers LDL, lovers triglyceride, and raises HDL.

* Niacin—How to start Niacin
100mg tid (q 2 to 3 days); 200 mg tid; 500 mg tid (after a month); 1000 mg tid. No control studies available; No long term hepatotoxicity

* Estrogen—First line therapy for postmenopausal women with hypercholesterolemia. Avoid in women with triglycerides over 500 (ERT raises triglycerides)

* Fish Oils)1 cap = 1 gm) Dose 3 gms tid (9 gms/d)

counterchecks, systems monitor and backup, and automatic alerts will go far in reducing systematic errors in the hospital and clinics. But most importantly, to learn from our mistakes, we need to identify and tabulate them. This will not happen in an atmosphere of fear; the reporting method must therefore educate, not punish; restore, not denigrate. Our fault-based malpractice system must be replaced by a no-fault model which focuses on just compensation and improvement in healthcare standards. And yes, the profession should encourage its senior members and its clinical teachers to share their adverse experiences with their junior colleagues. It is an effective way of saying: We all make mistakes—let's learn from them to benefit our patients.

I now approach the end of my presentation, and I would like to lead you out of the unsettling darkness of physician error into the warm sunshine of Medicine's healing mission. Notwithstanding our human foibles, and in the face of the current assault of bottom-line healthcare, let us pause to remember:

That our is a profession that saves lives, not, say, an industry that profits from creating weapons of war and destruction.

That doctors consistently improve health, unlike too many politicians who falsely promise to improve society, and

That we always comfort those we cannot cure, even as some members of that other learned profession confer undeserved confor through mocked justice.

Welcome to the noble world of doctoring, class of 1996. May I wish you and your patients good communication and good health.

Reference

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Nonmembers.—Please call 536-7702 for a nonmember form. Rates are $1.50 a word with a minimum of 20 words or $30. Not commissionable. Payment must accompany written order.

Services

The Pacific Center for Dermatology and Phototherapy is now receiving referrals for dermatology consultations and/or phototherapy. Lois Y. Matsuoka, MD., FAAD, FACP, (former faculty mem., Jefferson Med. College.) Ala Moana bldg., Suite 911, 1441 Kapiolani Blvd., Honolulu, HI 96814. (808) 941-5506.

For Sale

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The Weathervane

Outrageous.

Kusserow lives! In an unbelievable criminal indictment, Hilo ophthalmologist, *John Zelko MD* is being prosecuted by the state Attorney General's office for "criminal solicitation to commit first degree promotion of a harmful drug." The actual alleged crime—writing a prescription for *Fastin*, a schedule four diet medication. In these days when pot, ice, PCP, heroin, and designer drugs are marketed casually on the streets of Chinatown, Waikiki and Lahaina, one can only wonder what malicious line of thinking produced this egregious and destructive action against a 75-year-old physician who has given over thirty years of medical practice to the people of Hilo. This case smells remarkably like the work done by *Richard Kusserow* some years ago when he drove at least one doctor to suicide with his malicious and erroneous accusations of fraud against innocent doctors. Is this sort of desperate act necessary in order to justify the existence of a drug enforcement agency? What gives here? Is it any wonder that physicians become paranoid?

Politicians don't break agreements, they just make a new set of promises.

Laws which require health plans to allow into their networks any providers willing to accept the plans, terms and payment rates are called "any willing provider" laws. In 1995, Arkansas enacted a broad AWP law, which was supported by all provider organizations in the state. However, similar bills were defeated in Colorado, Florida, Georgia, Hawaii, Louisiana, Mississippi, Nevada, Rhode Island, Tennessee, Utah, Virginia and West Virginia. It is hardly likely we will get such legislation by the big bullies at HMSA and Kaiser that control medical expenditures in our little state.

Everything put together sooner or later falls apart.

In response to the Rand Report that concluded that a large surplus of eye care providers exists, the Association of University Professors of Ophthalmology (AUPO) recommended that medical schools cut the number of ophthalmic residencies from 454 to just 200—a huge 56% reduction. If this recommendation and similar ones for some other specialties should come about, the next generation of physicians will obviously be dominated by generalists. The times they are a-changin'.

The second half of the 20th century is a complete flop.

The degree of ignorance out there in our "sophisticated" culture is mind boggling. According to a recent Harris poll, 44% believe that optometrists are MDs, 35% believe that psychologists are MDs, 30% think that chiropractors are MDs, and a whopping 63% call podiatrists MDs. This issue of ignorance must be addressed through our AMA, state and medical specialty associations. When respondents were informed as to the true definition of MD, 97% did not want optometrists to perform laser surgery on their eyes. Is it any wonder that we have perverse laws which threaten quality health care, when one recognizes that many of these same people are elected to public office?

Faith is that quality which enables us to believe that what we are doing is useful.

The June meeting of the AMA House of Delegates dealt with numerous resolutions regarding the use of the excimer and other lasers by nonmedical practitioners. The frightening Idaho situation in which the Board of Optometry has decided to redefine the practice of medicine, has precipitated a lawsuit joining together the AAO, the Idaho Medical Association and the Idaho Society of Ophthalmology. Additionally, the AMA House came out strongly against renegade Dr Jack Kevorkian and the concept of doctor-assisted-suicide. Again, stress was made upon the difference between removal of life support systems, and actively helping a patient to kill him/herself.

The need of exercise is a modern superstition, invented by people who eat too much and have nothing to think about.

According to a recent energy expenditure study conducted at the University of Wisconsin, comparing stair stepper, treadmill, rowing machine, cycling ergometer, and cross-country skiing simulator, the treadmill proved to be the optimal indoor exercise machine for enhancing energy expenditure.

Science is truth: don't be misled by facts.

In these days of world travel, think strongly about your air carrier and the places you plan to visit. The FAA has a list of those countries that do not meet international aviation safety standards. Substandard means that the country's air traffic control system, supply and maintenance of emergency equipment, and aircraft inspection do not meet safety guidelines. Therefore, fly with caution to Belize, Dominican Republic, Gambia, Ghana, Haiti, Honduras, Nicaragua, Paraguay, Uruguay, Swaziland, Zimbabwe, and Zaire. Oh yes, have a nice trip.

Be frank and explicit with your attorney, it's his role to confuse the issue afterwards.

Cleveland orthopedist *Harry Figgie III MD*, has proved once again that altering records after the fact can cause great trouble and expense. At the trial, the doctor admitted that he had *amended* the record because it "did not reflect accurately the discussion." Not only did the doctor lose the malpractice case with damages at $3.25 million, but the Ohio Supreme Court set a punitive award at $1 million. Doctors are told repeatedly that if you alter the record, and you're caught (as will likely happen), you will lose the jury and the trial. If you feel you must add or correct the chart later, draw a line neatly through the erroneous part so the original are legible, then initial and date the change.

Addenda

- The *Sharper Image* now has a seat cushion which will stay warm for up to eight hours after five minutes in the microwave, named *Lava Buns.*
- Bob Dole is Gerald Ford without the pizazz.

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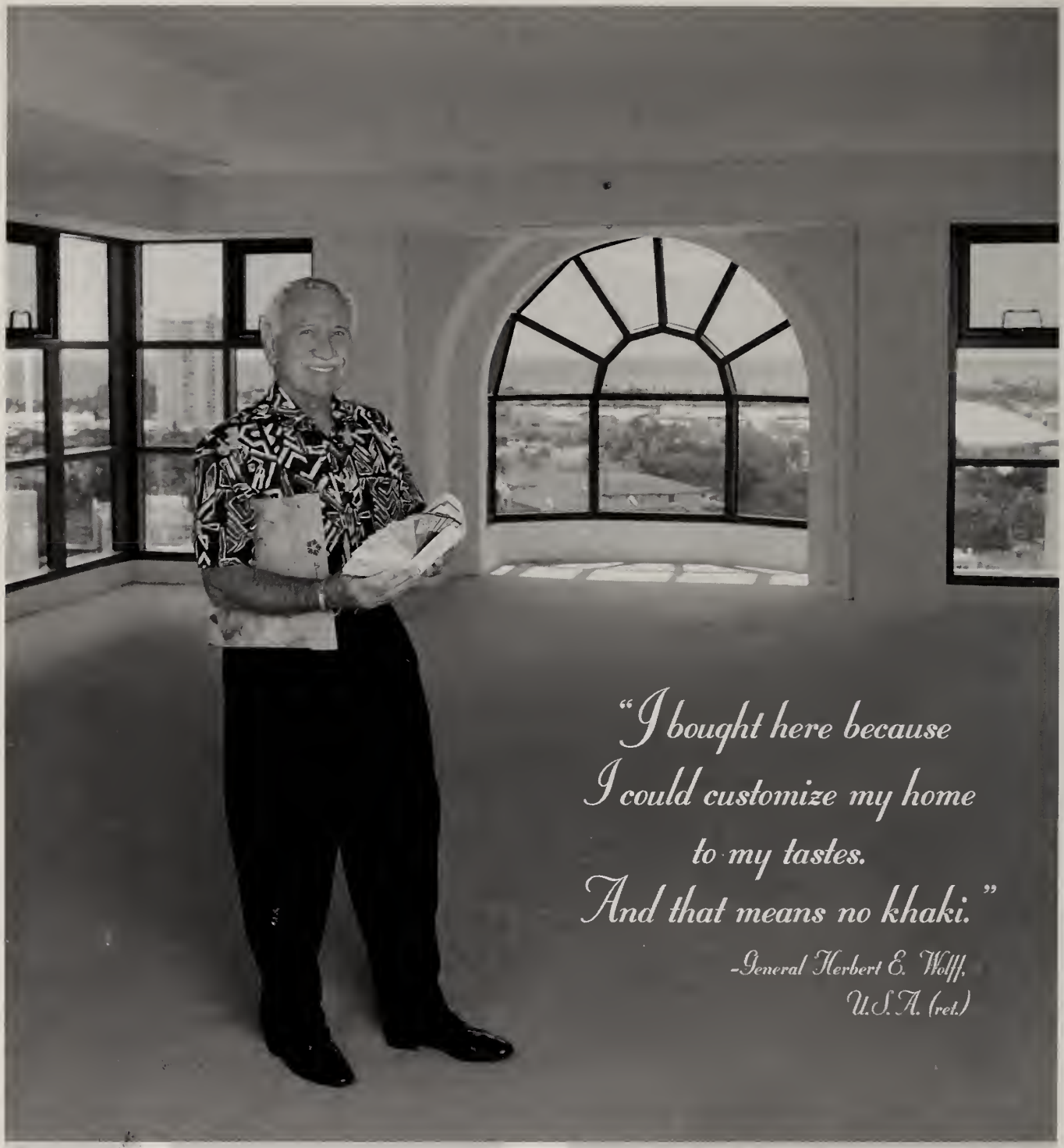
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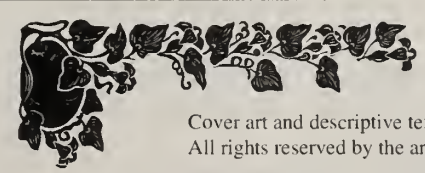
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Editorial

Norman Goldstien MD

When I asked Florence J. Chinn MD, "retired" internist, medical consultant for the State of Hawaii Department of Social Services and Housing from 1979 to 1987, and very active co-chair of the Hawaii Medical Association's Committee on Domestic Violence to serve as Guest Editor for this Special Issue, she hesitated for a day before accepting. She did not give the usual "but I'm so busy" (and she is!) replies, but she said:

"People may sympathize, but they can never fully understand the fears the victims experience. People may have fears when they learn of the horrors, but they can never feel the depth of the pain sustained by the victims. People may see the smiles and never realize the emotional scars hidden from view."

Thanks to Florence and her stellar panel of contributing authors, this Special Issue of the Journal will help us to better understand and help those who suffer the physical and psychological pain of Domestic Violence.

Guest Editorial

Florence J. Chinn MD

Optimum care for victims of domestic violence can only be achieved when physicians have an understanding of the fundamental dynamics of the problem, a working knowledge of the available community resources and the recognition of such victims so that early intervention and referrals may be made to the support and advocacy groups for assistance.

The manuscripts selected for this issue present the various challenges of domestic violence faced by physicians. They include a frank accounting by an emergency department physician of his interest in this problem and how encounters over the years changed his attitude. One of Hawaii's leading medical authority on the subject of domestic violence has written on some of the reasons why some physicians have not taken a more active role as advocates for victims who are their patients. While the physical traumas are successfully treated, oftentimes, the psychological effects are ignored or go unrecognized. A child and adolescent psychiatrist and medical school professor's paper addresses the effects on children growing up with violence. Another paper reports on the research

Continued on Next Page

Mahalo Nui Loa

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findings on a large group of abused victims long after healing has occurred for the physical trauma. Included is a paper by a highly respected trainer of personnel for support agencies dealing with victims, medical social workers as well as nurses and physicians. Because Hawaii is made up of people of diverse cultures, a newly-developed, culturally-sensitive approach for people of Hawaiian ancestry is included; the first of a series in approach to Hawaii's multiethnic society.

Also featured are some of the high profile advocacy groups, including a paper by a police officer covering the officer's experiences and the changes which the Honolulu Police Department has made in recent years. A simplified listing of emergency and support services for the major islands of the State of Hawaii is included.

October is Domestic Violence Awareness Month. Various events are being planned for the different islands to increase education and public awareness. A calendar is included for the candlelight vigils to be held.

Recent services made available, but may not be widely known, include:

- Implementation of ***Lifeline*** in which victims, who may be in imminent danger and need to reach the police without delay, may apply through ***PACT-Family Peace Center*** at 847-3285 for a free cellular phone preprogrammed for 911.
- On October 1, 1996, a new office under ***PACT-Family Peace Center*** will be opened for walk-in counseling, obtaining restraining orders, court advocacy and other services. This will enable victims to receive help without having to go to several different offices for these services.
- Earlier in the year the telephone company announced the availability of an automatic telephone service which reveals callers' numbers. On the recommendation of advocacy groups, the telephone company will provide on request a blocking of such information at no charge. Thus victims who have had to go into hiding will not be revealing their locations.
- Another recent change makes it possible for victims to page for crises response workers to meet with them at any location other than in their homes. Previously, only physicians were given the pager number to request a crisis worker to go to the physicians's office to counsel the victims.
- A major camera firm is making available a domestic violence injury documentation kit to health professionals at hospitals and clinics at a substantially reduced price for a limited time. Call 1-800-250-6425 for additional information.

Domestic violence is a complex and sensitive problem. When taking patients' history during medical encounters, physicians are most likely to be the first to learn of the abuse outside of the victims' family. By referring the victims to advocacy and support agencies, while providing treatment for the physical and psychological injuries, physicians are providing the victims an opportunity to consider their options and safety planning with trained counselors. Abuse increases in frequency and severity over time. Safety for the victims and their children are of prime concern.

If readers find the contents of this issue to be educational and helpful as a resource guide, then our mission will have been accomplished.

Domestic violence is a crime. Know your State's laws.



Governor's Message

Governor Benjamin J. Cayetano
September 1996

I am honored by the *Hawaii Medical Journal's* invitation to submit a message to readers of this issue dedicated to the subject of domestic violence—the single greatest cause of injury to women in our society.

This is truly a critical topic that deserves the attention of the medical profession in Hawaii. Physicians, members of our medical community, and others who read this monthly journal are in a unique position to deal with this *silent epidemic* that constitutes a major public health problem throughout our state and nation.

Last year, my first as Governor, I issued a proclamation declaring October to be *Domestic Violence Awareness Month in Hawaii.* In signing that proclamation, I was pleased to join with a number of community advocacy groups in focusing on the seriousness and enormity of the problem of domestic violence in our society. Again this year, I intend to proclaim October as a month in which Hawaii's people will address this social issue that cries out for attention and action.

Doctors play a crucial role in early diagnosis. As a "first line of defense," they have the skills and experience to recognize signs of abuse, along with the resources to refer victims and their families to appropriate agencies for counseling and follow-up.

I commend the journal's publisher, the Hawaii Medical Association, for its decision to devote an entire edition to domestic violence. I thank Hawaii's medical community for its past commitment to curbing violence to women and children, and I encourage all of you to continue your participation in this ongoing prevention campaign.

HMA President's Message

Carl W. Lehman MD

Violence is one of the most profound, yet preventable health epidemics of our time. Domestic Violence is pervasive. There is no protection in economic status, race or creed. Approximately 2,000,000 women are assaulted by their intimate male partners annually in the United States. Twelve million or 25% of American women will be abused in their lifetime. Twenty-five per cent to nearly half of pregnant women have been physically abused and 22% to 35% of women who present to emergency departments for any reason have been assaulted.

The American Medical Association has recognized this silent epidemic in our society. Dr Robert McAfee, a recent president of the AMA and a friend of many Hawaii physicians was very influential during his tenure in emphasizing the importance of this silent epidemic. The Alliance of the American Medical Association has worked to promote good health for all Americans. Many state societies have become active in educating the public and physicians about the significance of domestic violence. The national as well as many state alliance organizations have promoted the SAVE Program (to Stop American's Violence Everywhere). The American Medical Association has published excellent pamphlets which are available through the AMA which include Diagnostic and Treatment Guidelines on: (1) child physical abuse and neglect; (2) child sexual abuse; (3) domestic violence; (4) mental health effects on family violence; (5) elderly abuse and neglect and (6) strategies for the treatment and prevention of sexual assault.

The American Medical Association's resident physician section has recognized this silent epidemic and is attempting to educate their colleagues about the problem. Dr Erin Tracy wrote in the JAMA, June 12, 1996, Vol. 275, No. 22 in the resident's forum about his experience in questioning 8 consecutive patients who arrived at a clinic with routine gynecological complaints. He asked each of them if they had ever been physically abused and was horrified to learn that all 8 women had been physically assaulted by their intimate partners within the past year. He points out that physicians do not routinely ask patients if they have ever been threatened or harmed. As he noted, when women were asked, they showed no hesitation in talking about their experience, but seemed hesitant to volunteer the information.

Why don't we ask? Is it because we are not prepared to assist the patient who has a problem or are we unprepared to help or refer patients with problems due to domestic violence? Or is it because we have not been trained and feel uneasy in uncovering a problem we cannot handle? These are some of the reasons, although there are many more. Of 143 accredited medical schools in the United States and Canada, only 47% require formal training in domestic violence. The Hawaii Medical Association Committee on Domestic Violence and the Hawaii Medical Association Alliance have been promoting education of physicians as well as the public regarding this problem.

Thanks to all of those members involved in communicating on this subject. If we are to resolve this massive problem of violence, we must teach our children to interact and resolve problems respecting others rights and privileges. We must realize that intimate relations and satisfactory relationships do not occur by one controlling the other, but rather by resolving problems through mutual respect and a willingness to understand each other.

I urge all physicians to include a question regarding physical abuse in initial patient questionnaires or during history taking. When you identify a patient who needs help, please use information in this journal as a source for referral to a crisis agency when you feel you cannot handle the case appropriately.

My thanks goes to Dr Florence Chinn for her hard work and dedication in compiling and organizing the material in this issue of the Hawaii Medical Journal. I also wish to thank Dr Chinn and Dr Shay Bintliff for their leadership and accomplishments as co-chairs of the HMA Domestic Violence Committee through the year.



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There is No Excuse for Domestic Abuse— Reflections on Violence

Frederick C. Holschuh MD

I could comment for hours about victims I've seen over my 25 years in the Emergency Room (ER) who were battered by those they trusted, about swollen, pulpy, fractured faces; about broken limbs, multiple bruises, stab wounds and gunshot wounds that were meant to maim; about panic, fear, hopelessness and about the deaths of some of the victims. I could comment about the horrific effects on children who witness domestic violence.

Instead, I want to make the same confession I made publicly at a recent conference on domestic violence in Hilo. I am ashamed to admit for the first 7 or 8 years of my ER career, I was one of the health care providers who were ignorant of the dynamics of domestic violence. I, along with many others in the ER, police, rescue teams, victims' families, etc., felt that battered women "asked for" this treatment. That this was their fault for not just leaving the relationship. "Guess who the medics are bringing in again?" "Hawaiian love," "What fools these women are," etc. Some ER staff to this day, feel that way. Something happened to me in the late 70s that changed my outlook. I asked a big violent man why he had beaten his wife, who was a frail, retarded, Japanese woman. His reply was to savagely attempt to attack me to show me "what a real beating was." In that instant, I realized what horrible terror these victims must feel on a daily basis.

So now, 20 years later, many of us have changed our misguided attitudes, and there is a push across our state and nation to deal with the issue of violence in our society. Dedicated people like the members of the Hawaii Medical Association Domestic Violence Committee, Dr Bob McAffee and Dr Lonnie Bristow of the American Medical Association (AMA), our HMA staff, judges, prosecutors, police, paramedics and most importantly, victim advocates, have come together to attempt to solve the domestic violence problem. We have immensely dedicated people, many themselves former victims, who run the support groups, shelters and the advocacy agencies that are so critical to the survival, emotionally and physically, of victims.

So why, with the tremendous re-tooling of thinking and multidisciplinary efforts to deal with domestic violence, is this such a gut wrenching issue for me? The answer is simple: Domestic violence continues to rear its ugly head on a daily basis. This past weekend (mid-May, 1996) in the Hilo ER, within three hours I cared for two young women who had been so savagely beaten by partners, that bones were broken. One had been a victim multiple times, and had a long-standing temporary restraining order (TRO) in place against the batterer. Both were asked the question by ER staff and police that Mr Casey Gwinn, the prosecutor for the city of San Diego, says should never be asked: "Do you want to press charges?" Mr Gwinn says, "You don't ask bank employees after a holdup if they want to press charges." I'm going to free associate and express a number of thoughts, quotes, ideas and questions about this issue.

I have had the privilege of attending, with my wife Diane, two very powerful conferences recently in Hilo. Both were at New Hope Church and sponsored in part by the Transition Network of Hilo and the Hawaii County Medical Society Alliance (HCMSA). The first meeting involved Mr. Casey Gwinn of San Diego along with a number of local experts. On May 24th, Ms. Denise Brown, the sister of Nicole Brown Simpson, was the keynote speaker at a conference that included a welcome by County Council chair Keiko Bonk-Abramson; Gail Pincus, domestic violence expert from Los Angeles; Alana Bowman, a Los Angeles city attorney and expert on the subject; and Stephanie Launiu, Executive Director of the Bay clinic on the Big Island. There was not a dry eye in the meeting hall when Judith Fox-Goldstein of Hilo presented a moving and courageous dedication to her murdered son. On display in the room were photos and memorial displays of murdered victims of domestic violence. Diane had known personally one of the victims and her family, Lynn Kotis, from Honolulu, and I knew Steven Nagao and his family from Hilo. Both had been murdered by partners. At the opening of the session, all the victims of domestic violence were asked to stand. A huge majority of those in the room stood, including most of the speakers and Diane who had been in a brief abusive relationship many years ago. I mention all of this to emphasize how pervasive this problem is in our society and how it affects us all.

The Big Island has some particularly troublesome statistics. Hawaii County leads the state in unemployment and poverty, in the rate of abuse of alcohol and other drugs and in the rate of cases of abuse of dependent adults and children. The Big Island has nearly three times Oahu's rate of temporary restraining orders (TROs) against perpetrators of domestic violence. More than one domestic violence complaint per day is filed on the Big Island, and I'm sure many other incidents are never reported.

The HMA has sent a resolution to the upcoming AMA House of Delegates meeting asking:

1) that the AMA work in conjunction with victim advocacy groups to evaluate the safety and effectiveness of policies such as mandatory reporting and

2) the AMA evaluate the desirability of uniform national standards for the prosecution of domestic violence cases.

We are all aware of the controversy mandatory reporting creates and of the need for a secure safety net for victims. Casey Gwinn points out that this issue should not be about a dispute between two adults, but about the state or other jurisdiction arresting and prosecuting perpetrators of the crime of battering. At the May 24th meeting, even Gail Pincus and Alana Bowman took opposing positions on mandatory reporting to police. It seemed that a majority of victims were in favor of mandatory health care provider reporting as long as there was a safe place for them to go.

Another area of controversy regarding violence is how much of an association there is between domestic violence and the use and abuse of alcohol and other drugs. I have been at many meetings over

the years and have heard many victim advocates claim, quite correctly, that substance abuse is no excuse for domestic abuse. They also state, quite correctly, that substance abuse does not cause domestic violence. I do not disagree with these concepts, but I almost never see an injured victim of domestic violence that doesn't involve the use of alcohol and/or other drugs at the time of the battering. My feeling from the recent meetings is that most of the victims of violence agree with this. I know that ER visits are only part of the spectrum of domestic abuse.

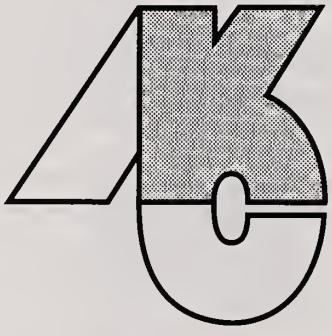
Alcohol and other drugs don't cause domestic battering, but usage escalates the level of violence. The use of ice and crack cocaine creates an increase in the severity of injuries, and the feeling of the experts from LA is that it increases the number of murdered victims.

My point in mentioning this is that to stem domestic violence, we not only need to vigorously prosecute batterers while keeping victims safe, but we must also vigorously address treatment issues for batterers. Batterers' treatment programs will not "cure" batterers unless they are willing to change their behavior. I don't know whether mandatory substance abuse programs will do any good. Probably not, as it goes against the grain of the "desire for change" concept of 12 step programs.

I think it is very important, however, to not forget the correlation between substance abuse and domestic violence. It is not the cause or an excuse, but there is a definite association. Treatment programs for batterers must not only address the "power and control" issues, but substance abuse as well.

Some final thoughts:

- Across America, many courageous people provide shelter and comfort to abused women and their children who are literally "running for their lives."—Denise Brown.
- Protection orders against perpetrators of domestic violence should be enforced across state lines. (Guest Editor's note: The Violence Against Women's Act (VAWA) of 1994 makes this enforcement effective across all state courts and tribal courts when a form is filed.)
- "It's difficult to be brave when you're scared, hard to see light at the end of the tunnel with your eyes swollen shut." —Denise Brown.
- Battered women are at greatest risk when they leave the relationship.
- Batterers are most afraid of jail because they lose the ability to exert power and control. —Gail Pincus.
- Everywhere batterers go, the message should be loud and clear: "There is no excuse for abuse; domestic violence is intolerable."
- In some areas, murders in domestic violence cases have declined by one third. Alana Bowman said that some attribute this to mandatory arrest policies. Other experts feel it may be a change in drug use from crack to Heroin.
- There are more serious injuries when the batterer uses crack or ice. Alcohol and other drugs don't cause battering, but can contribute to more devastating injuries.
- The Big Island needs to have an established domestic violence response team, like there is in LA, Honolulu and Maui. LA has volunteers to assist and to respond to incidents with police. (Guest Editor's note: HNL has DART trained personnel that go with police).
- We must begin teaching about all aspects of violence in school curricula. America must take a firm stand against violence on TV, in video games, etc.
- I'm beginning to see larger numbers of battered teenage girls. It's almost like a fad. A young 16-year-old victim recently excused her boyfriend by telling me "He has a lot of stress."
- "Batterers should start hiding, not the woman they harm" from an announcement on new laws in Michigan that will be the toughest domestic violence laws in the nation.
- A line from the theme song of a factual movie about teen domestic violence: "Who would ever guess what lies beneath the tenderness?"
- Hawaii must change its laws to allow for easier prosecution of batterers when the victim refuses to "press charges" or testify in court. The victim must not be made to be "investigator and prosecutor" and must not be blamed for refusing to testify against her partner.
- "Our goal should be to allow abused women to not crawl, but walk out of a violent relationship, to survive and thrive."—Stephanie Launiu.
- A goal should be to "make violence personal and keep victims safe." Bobbie Leone, Executive Director, Transition Network, Inc.
- "Where there is violence, let each of us make a move toward gentleness."—St Francis of Assisi
- "Pity and compassion in a world of pain, mean little unless it leads to change."—12-year-old girl from South Central Los Angeles.



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Domestic Violence...Myths and Barriers

Shay Bintliff MD, FACEP, FAAP

The past 15 to 20 years have seen the birth of a new national awareness of the impact of family violence on our national health and resources. The Surgeon General of the United States has identified domestic violence as the nation's number one health problem. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has mandated, as of January 1992, that all emergency departments and ambulatory care facilities establish guidelines for the identification, evaluation, management and referral of adult victims of domestic violence. In June 1992, the AMA published guidelines for identification and intervention with domestic violence victims. All states now have provisions in their laws that define marital rape as a crime, and many states have mandatory arrest statutes for men found by the police to be abusing their wives.

This review identifies some common societal and professional barriers limiting the emergency response to domestic violence.

Myths

A substantial obstacle to intervention is the abundant social and cultural biases which pervade medicine and society as a whole. Left unchecked, they can easily cloud the judgment of physicians evaluating victims of domestic violence. Some common myths are refuted below.

Myth: Intimate abuse is isolated and infrequent.
Fact: The problem is currently recognized as being of epidemic proportions.

Myth: Only poor and minority men beat their wives.
Fact: Domestic violence shows no greater affinity for the lower socioeconomic groups or minorities. The difference appears to have more to do with reporting and the accessibility to resources. Women of greater means tend to have more options available to them for dealing with the problem. Women without such resources are more likely to turn to public agencies for help.

Myth: Just as many wives batter their husbands as men batter their wives.
Fact: In fact, 95 to 99% of domestic violence victims are women. Although not exclusively female, the overwhelming majority of battering victims are women.

Myth: Abuse victims exaggerate their injuries.
Fact: Most battered women minimize their injuries. They are usually not candid about the source of the injuries due to their shame and embarrassment.

Myth: Battered women provoke their abuse.
Fact: Abusers often claim they were provoked in order to avoid accepting responsibility for their actions. This enables them to see themselves as victims and continue their behavior. Additionally, some women, aware of their abuser's cycle of violence, may provoke an argument in order to diffuse the building tension and stave off even worse abuse they may feel is yet to come.

Myth: Drinking causes battering.
Fact: Alcohol is involved with battering about 50% of the time but is not the cause. Studies have shown that a third of abusers are abusive only when they drink, a third are abusive—drunk or not, and a third don't drink. Drinking is not a cause of battering but an excuse that abusers use to deny the abuse is a problem.

Myth: Only sick or psychopathic men beat their wives.
Fact: About 20% of men who batter are violent with others as well as their family. The other 80% are not. They are often well-liked and appear attentive with their mates publicly. Since they may be seen as the "perfect husband" by others, the women's stress over escaping the relationship is heightened. Victims are afraid no one will believe them. Unfortunately, they're often right!

Myth: If a woman wanted to stop her husband from beating her, she would act differently.
Fact: Battered women usually find that regardless of their behavior with their partners, the battering continues and usually escalates. This illustrates a major pitfall of "blaming the victim." It is easier to believe that the woman has somehow incited her own abuse. Otherwise, if domestic violence is a random event totally out of the victims' control, what's to keep us or those close to us from becoming victims as well? This myth is difficult to erase. Nevertheless, refuting it is crucial to breaking through the barriers to provide appropriate intervention for these women.

Myth: If things were really that bad, the woman wouldn't stay; therefore, she must like it.
Fact: Many women do leave abusive situations. Women's shelters are always filled to capacity. Those who stay do so for a variety of reasons. She may think he'll change or that she loves him enough to "make it work." She may be afraid of not being able to support herself and her children without a job or the skills to get one. She may think once he realizes what he's doing, he'll stop. She may be afraid of retribution with her, the children or other family members and friends. She may not want to break up the family. Her attempts to seek help from the police, courts, clergy, family, friends, etc. are often met with denial and/or disbelief. She may be severely isolated from friends and family (contacts who could help her). Most importantly, she believes him when he says he won't do it again.

Myth: Domestic violence does not affect children.
Fact: It is clear from all reviews of statistics that this is not the case.

Myth: If you are pregnant, you are safe from abuse.
Fact: It is not uncommon for the first incident of abuse to occur during pregnancy. Women who are abused also frequently notice escalation of abuse during pregnancy.

Continued on Next Page

Barriers to Physician Intervention

Lack of knowledge and Education

Physicians aren't trained to recognize the subtleties inherent in the history and physical examination of victims of domestic violence. This difficulty is partly due to the limitations of the "medical model." It teaches us to break every problem down into the most basic and definable physical entity. Thus, the diagnosis becomes: periorbital contusion, colles fracture, multiple contusions, nonspecific abdominal pain, closed head injury or laceration etc., rather than addressing the larger issue of assault—whether domestic or otherwise. The history becomes ahistorical and decontextualized. Therefore, the chart may state "blunt trauma to head, indoors" rather than "head slammed against wall by husband at home."

Victims may have multiple visits to the Emergency Department (ED), often for nonspecific complaints with the occasional smattering of "real" illness/injury. Rather than recognizing this pattern as symptomatic of domestic violence, physicians may label these patients as "neurotic", "hypochondriacal", "hysterical" or "crocks". In this way, the victim's feelings of powerlessness and low self-esteem are reinforced. Proper training regarding these patterns of presentation can help to overcome this barrier.

Limited resources

Although improving, the availability of medical and community, resources remains inadequate. Those community and hospital resources which do exist are frequently operating at maximum capacity. More shelters, safe houses, social services, drug and alcohol treatment centers and rehabilitation facilities, legal assistance and support groups are needed. The relative lack of those resources is a major source of frustration for those emergency physicians engaged in attempting to impact on this issue.

Societal Misconceptions and Cultural/Personal Biases

Individual experiences and upbringing necessarily affect a physician's management of domestic violence. The nature of the issue makes it difficult to remain impartial and objective. With little training regarding proper management, we fall back on personal experience for direction. A number of commonly held myths and misconceptions have already been discussed. Additionally, there is the temptation to view domestic violence as a private matter that is best resolved privately—especially in the context of little or no physical injury. In fact, without intervention the vast majority of domestic violence escalates to pose a much greater threat to victims.

Another source of frustration for physicians is the frequency with which violence is repeated. Patients are advised to leave the violent situation and are provided with phone numbers of community outreach organizations. Yet they continue to return to the same environment. This may be incorrectly interpreted as the patient's lack of concern for her own welfare. In fact, returning to the environment may have a great deal to do with concern for her welfare and that of others with whom she is close. Physicians can provide resources and offer support. We cannot force others to accept our solutions to their problems. Intervention may be undertaken at a later date when further action is more feasible for the patient. Although victims may be unable or unwilling to accept help on one visit, it does not necessarily follow that the response will be the same on the next.

Too close for comfort

Depending upon the age, sex and circumstances of the victim, physicians may identify with them. Those physicians who have not experienced violence in their own lives may have difficulty acknowledging that others who seem so much like themselves could have such problems. They may also identify with their abused patients on the basis of their own history of abuse. As an example: One study showed that 14% of all male MDs and 31% of all female MDs have experienced significant familial violence. This may make intervention with victims of violence "too close for comfort" causing some emergency physicians to avoid the issue altogether.

Fear of Offending

Fear of offending the victim is common but rarely occurs. Most victims will welcome the opportunity to discuss the problem. Regardless of whether they disclose their situation, a message of concern was still provided. This identifies the physician and his/her institution as a potential future resource.

Physicians concerned with offending abusers may view the revelation of violence as an accusation needing to be either proven or refuted—neither of which is the role of either physician or patient. It is possible to provide support, information and referral to patients reporting abuse without ever needing to "prove" their credibility.

Powerlessness

All physicians like quick fixes. Unfortunately, intervening with domestic violence will not be one. Lack of training fuels feelings of inadequacy to manage the problem ourselves, and it may appear easier to avoid the issue altogether. Nevertheless, although we can't "fix" the problem, we are often the first contact for victims. We have the ability to acknowledge the problem and make appropriate referrals. It is important to begin to accept and acknowledge that simple goal as an important beginning for many patients. Physicians must be able to tolerate the repeated events of violence and not give up on their patients.

Time Constraints

This is a powerful concern. How do we deal with involved psychosocial issues with a busy office or an entire department of sick and injured people waiting? Although adept in identifying and managing child abuse victims, we have not, as yet, sufficiently applied those skills to the identification and management of abused women. Although time and resources are often limited, child abuse is not ignored. Rather, available resources are accessed and used to the patient's best advantage. Fortunately, systems exist for victims of child abuse. It is time to extrapolate that concept to include all victims of domestic violence. Asking direct questions while being knowledgeable of available support systems can ultimately reduce the time required to effectively intervene.

Pandora's Box

By inquiring about potential violence, physicians fear getting "more than we bargained for". The problem of limited resources factors heavily here. However, once the problem has been identified, the other physical concerns and unusual complaints attain sudden clarity. The problem can now be addressed rather than puzzling over the question. Domestic abuse victims are three times more likely to suffer repeated violence than victims of other violent crimes. Identifying victims may, in fact, decrease the number of subsequent visits because the core issue is being addressed.

Conclusion

Domestic violence is not just a medical or social issue. It is not only a police, trauma of women's issue, nor a children's issue or an issue of the elderly. Domestic violence is a pervasive and insidious problem that affects every level of our society.

Our actions may have enormous impact upon the direction this

society takes in the future. We live in the most violent peacetime society in the industrialized world. The sad truth is beginning to unfold that the overwhelming majority of this violent and destructive behavior is learned in our homes. What can be learned can be un-learned. There has been a profound change in the public response to domestic violence over the last fifteen years. However, personal biases, gender stereotypes and societal misconceptions still legitimize control of one partner over the other and therefore rationalize abuse. Let's seize the opportunity to improve the outcome for these patients while optimizing the proper and efficient use of our limited medical resources. The task may appear daunting. However, considering the potential for improved patient care and outcome, it's well worth the effort.

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When Children Witness Domestic Violence

Alayne Yates MD, Professor and Director, Division of Child and Adolescent Psychiatry, University of Hawaii

Children who grow up in violent homes do not necessarily become violent parents later on. Some children remain asymptomatic. However, the majority are behaviorally disordered and others suffer from PTSD, grief reactions and separation anxiety. Children who themselves are not abused are not likely to be identified and appropriately treated.

Historical

Violence against wife and child was legal in this country and in England until the early part of this century. Under the doctrine of patria potestas, family members were the property of the father, and he had every right to discipline them in most any manner he saw fit. However, some limits were recognized: the *Rule of Thumb* law permitted a husband to beat his wife with a stick no larger than the circumference of his thumb. In some towns husbands were prohibited from beating their wives after 10 pm or on Sunday.[1]

Incidence

Recent studies[2,3] indicate that at least one in five women patients in a primary care setting have experienced domestic violence in their adult life and at least 1 in 20 have experienced it in the past year. Yet these patients rarely report being abused to their physicians. Women who are subject to abuse are likely to be under age 35 and separated or divorced. As a group, they have many problems including suicide attempts, drug abuse, anxiety, depression, and somatic concerns but they are not more likely to be hospitalized for psychiatric treatment. Less is known about the (usually male) abusers or the kinds of interpersonal issues that foster family violence. However, the level of violence can be predicted by the amount of couples' conflict about child-rearing and the social support available to the men.[4,5]

The majority of children who witness abuse themselves have been abused,[6] making it difficult to tease apart the effect of witnessing abuse from the effect of experiencing it. In addition, children living in cities are frequently exposed to out-of-home violence. For instance, children witness 10 to 20% of the 8,000 to 16,000 murders committed each year.[7] Martinez interviewed 165 6-10 year old, low income children living in Washington, DC. He found that 19% of the younger children and 32% of the older children had been shot, stabbed, mugged, chased, or threatened or had witnessed these events. Six percent of the boys had been shot and 23% had been mugged at least once.[8] Parents were usually unaware of the extent of this violence. In general, studies of the effect of domestic violence on children have not been controlled for subjects' exposure to violence outside the home.

Effect on Child

The good news is that children who are reared in violent homes do not necessarily become violent parents later on. There is little evidence to support the claim that abuse begets abuse.[9] One-third will grow up to follow a pattern of inept, abusive, or neglectful parenting and one-third will not. The remaining third could go either way, depending on circumstance and social stress.[10] The bad news is that more than half of children reared in violent homes demonstrate severe behavioral problems and below average social competence. When given the choice, they tend to choose aggressive solutions to problems.[11] In adolescence they are likely to engage in high risk behaviors such as drug use, run away, and promiscuity.[12]

Preschool children react differently than school age children. Even after considerable exposure to violence, they may appear asymptomatic[13] or develop only non-specific symptoms of irritability or depression. However, 4 to 6 year old youngsters from violent homes react quickly and fearfully to scenes of confrontation when they engage in structured doll play.[4] They try to deny aggressive content or they appear disinterested and decide to stop playing. This suggests significant levels of dysphoria below the surface.

Children reared in violent households tend to identify with either the victim or the aggressor. Children who identify with the victim may become self-punitive, scratching or biting themselves.[14] They often think they caused the fight and should have been able to stop it. Those who identify with the aggressor express violent themes in play, wiping out less powerful figures. In real life they often are characterized as bullies. Identification with the aggressor may be the reason why child witnesses to violence are apt to be violent toward siblings[15] and why, after the abuser is gone, some children will begin to swear and lash out at the non-abusive parent.

One-quarter to one-half of children are hurt as bystanders when violence erupts or when they attempt to intervene in the struggle. In part, this is related to the fact that the parents have usually been arguing about how to raise the children.[4,14] Girls and boys react differently to domestic violence. Girls are more likely to whimper and cling to the abused parent while boys are more likely to disobey or lash out impulsively. Either of these reactions can further enrage the abusing parent and place the child at risk for abuse. Children of both genders find it easier to describe the violence than talk about how they feel about it .

Less than half of older children exposed to moderate-to-severe trauma will develop symptoms of PTSD, and many of these will recover without residual symptoms. The outcome depends on the child's resilience, family support, severity of the trauma, and the child's closeness to and perception of the event. By and large, symptoms of PTSD are the same in children as they are in adults, including intrusive thoughts, nightmares, increased arousal, restricted range of affect, and sense of foreshortened future. Differences seem related to developmental level. Children are more likely than adults to regress by wetting the bed, sucking the thumb, or using baby-talk. Children's nightmares are less clearly related to the

actual event. Children play out their anxiety, recreating the traumatic event again and again. This is called repetitive play.[16] Seven-year old Marty had seen his father punch his mother in the face and fracture her nose. Weeks later, he began to play a favorite game. He would take his sister's Barbie doll and swing its head against the door jam. Then he would wash the doll's face and carefully brush the hair back into a pony tail, saying all the while, "Now you're OK." Repetitive play indicates the need for psychiatric treatment. Without treatment, the child continues to compulsively replay the trauma for years without understanding the connection to actual events.

Less frequently considered than PTSD, but no less important, are grief reactions and separation anxiety symptoms.[17] If the abusive parent has had a caring relationship, the children can be expected to grieve if there is a separation. This grief is rarely recognized as society views the children as lucky to be out of a bad situation. Separation issues are prominent in instances where one parent has been murdered and the other has disappeared or committed suicide. Young children may have been left alone with a parent's body all night, frightened and unable to summon help. As sole witnesses to the crime, they may be subject to intense interrogation by the police. They may be abruptly placed in a foster home, losing both parents, clothes, toys, friends, and the old, familiar school.[18] Therapeutic goals are to resolve grief at the loss of the parents, rage at the perpetrator, fear of retribution, helplessness, guilt over not having been able to prevent the crime, and adjustment to new parents and a different environment. Those children who were not directly involved in the violence may deal with many of the same issues but are less likely to be identified as needing treatment.

Domestic Violence Candlelight Vigils

Each year during October—National Domestic Violence Awareness Month—we mourn those lives we lost as a result of partner abuse.

Hilo Silent Witness March/Candlelight Vigil **October 9**
4 pm March County Building
5 pm Vigil Mooheau Bandstand
Sponsored by Family Crisis Shelter, Inc.

Kauai Candlelight Vigil **October 9**
5 pm St. Michael's All Angels Episcopal Church Lihue
Sponsored by YWCA, The Shelter

Kona Feeding the Homeless
Candlelight Vigil **October 24**
5 pm Hale Halawai
Sponsored by Family Crisis Shelter, Inc & Wendy's Old Fashioned Hamburgers

Maui Candlelight Vigil **October 9**
6 pm Location to be announced
Sponsored by Women helping Women

Oahu Candlelight Vigil **October 9**
7 pm Central Union Church
Sponsored by Women's Concerns Committee

Other events will be announced at a future date

Treatment

Children who have been exposed to significant violence deserve a thorough evaluation. This may take several sessions. Some children will not need further intervention unless they become symptomatic. Children with grief reaction or separation anxiety disorder should be treated appropriately. Behaviorally disordered youngsters are likely to need a behavioral management program coordinated between home and school. Behaviorally disordered children should have a complete evaluation as depression or PTSD can accompany or be the basis for behavioral problems.

Pynoos and Eth have developed an effective, brief therapy format for children with PTSD.[19] After forming a relationship, the therapist encourages the child to draw pictures and make up stories. Inevitably, images of the traumatic events intrude into the child's creative work. The child is encouraged to talk about what happened, the worst moment, who was responsible, and what might have changed the course of events. The child becomes extremely anxious but later feels relieved. The therapist supports the child through the desensitization process, addressing issues of guilt and grief.

Family involvement in therapy is extremely important. The abused parent may suffer from PTSD and be emotionally unavailable to the children. Others may unintentionally feed into children's anxiety. Children are considered recovered when they are no longer hypervigilant, can concentrate better at school, have resumed a normal pattern of activity, and are less pessimistic about the future.

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PTSD Among Women Survivors of Domestic Violence in Hawaii

Edward S. Kubany PhD*, William F. McKenzie MD**, Julie A. Owens BA*, Mary Beth Leisen MA*, Aaron S. Kaplan MA*, Emma Pavich MSW*

Empirical evidence suggests that between 33% and 83% of Hawaii women receiving services from programs that serve battered women meet diagnostic criteria for posttraumatic stress disorder (PTSD). In addition, PTSD symptom severity is associated with depression severity, lowered self-esteem, and diminished quality of life. Combined with evidence that domestic violence often goes on for years, these findings provide additional compelling reasons why domestic violence screening should be conducted routinely in medical settings.

It has been estimated that between 22% and 35% of women who seek care in emergency departments are there because of domestic violence and that physicians detect only 5% of all cases.[1] Extrapolating from the results of a 1992 survey conducted on Kauai, it is estimated that between 14% and 20% of women in the State of Hawaii are victims of domestic violence.[2-3] Based on this estimate, at least 49,000 women in Hawaii between ages 21 and 64 were survivors of domestic violence in 1992. Preliminary data drawn from clinical inquiry at an Oahu medical clinic in 1996 are consistent with these numbers and estimates. In their responses on a recently developed trauma history screen, 11 of 60 women patients (18%) at a rural Oahu ob-gyn clinic indicated that they had been "slapped, punched, kicked, or otherwise physically hurt by an intimate partner" at least once.[4] Thus, domestic violence appears to be an immense problem in the Aloha State.

Physical injuries are only the most visible reasons why many authors, American Medical Association committees, and AMA-associated organizations have called for mandatory domestic violence screening in primary medical care settings.[1,5-6] Every bit as deleterious as the physical effects of domestic violence, however, are its pernicious and long-lasting psychological and emotional effects.

Domestic violence often evokes intense fear, helplessness, and horror in its victims. As a traumatic stressor, domestic violence can cause victims to develop posttraumatic stress disorder (PTSD). PTSD symptom clusters include

(a) *reexperiencing the trauma* (eg, intense distress when reminded of the trauma, nightmares, and physiological reactivity when exposed to reminders),

(b) *avoidance* (eg, efforts to avoid thinking about the trauma and avoidance of people, places, and activities that serve as reminders),

(c) *emotional numbing* (eg, loss of interest in important activities, detachment from others, and inability to experience positive emotions), and

(d) *hyperarousal* (eg, insomnia, irritability or anger, hypervigilance, and problems with concentration).

To make matters worse, if pervasive symptomatology is still present six to nine months after the trauma, subsequent improvements may be unlikely to occur without some intervention.[7,8,9]

Because of its high rate of occurrence, domestic violence may be the single most common cause of PTSD in Hawaii. In a study of 50 women residing in a shelter for battered women on Oahu, 55% of the women obtained questionnaire scores that exceed a cut-off score for making a PTSD diagnosis.[10] This finding is consistent with results obtained with shelter samples of battered women on the mainland, where PTSD incidence rates have ranged from 45% to 84%.[11-12] Among 164 battered women receiving support group services from the Family Peace Center in Honolulu, 33% of the women obtained scores that exceed a cut-off score for making a PTSD diagnosis.[13] In a project nearing completion, where PTSD symptomatology is being assessed by means of a structured clinical interview, 62 of 75 women (83%) who sought counseling in the past year received a DSM-IV diagnosis of PTSD.[14]

In addition to being a cause of PTSD, domestic violence can also produce serious clinical depression. PTSD, major depression, and dysthymic disorder have high comorbidity. In the shelter sample of battered women mentioned earlier, all seven women who were severely depressed (with scores above 30 on the Beck Depression Inventory) also had PTSD.[10] In two studies of battered women in Hawaii, scores on measures of PTSD and depression were highly correlated (.76 and .73).[10,14] Thus, when physicians identify a patient who has been exposed to physical or sexual violence, and the patient "looks" depressed (eg, appears apathetic, has flat affect), there is a strong possibility she also has PTSD. At the same time, if a patient looks depressed, this may serve as an additional "red flag" to physicians that trauma has occurred (and could be ongoing).

Women with domestic violence-related PTSD are also at heightened risk for lowered self-esteem, social avoidance, suicidal thoughts, *irrational* abuse-related guilt,[15] and an impoverished quality of life. Among 68 battered women receiving support group services from the Family Peace Center in Honolulu, PTSD severity was highly correlated with negative self-esteem (.50), social anxiety and avoid-

* Pacific Center for PTSD
** William F. McKenzie, MD, Inc.

Send reprint requests to:
Edward S. Kubany, PhD
Pacific Center for PTSD
Department of Veterans Affairs
VAM&ROC
1132 Bishop Street, Suite 307
Honolulu, Hawaii 96813

ance (.54), suicidal thought frequency (.57), and abuse-related guilt (.55).[13] In a different sample of 75 battered women, PTSD severity was highly negatively correlated with a measure of quality of life (.51).[14] Thus, empirical evidence with women in Hawaii indicates that the deleterious effects of domestic violence are pervasive across many areas of functioning.

The results of nationwide surveys of family violence indicate relatively high rates of aggression by women as well as men.[16] However, domestic violence usually has far more serious consequences for women victims than for men who are "victimized" by women who fight back.[17] This point may be brought home dramatically by presentation of some trauma history data collected recently from 68 men and 23 women in a residential treatment program for substance abuse in Honolulu.[18] As shown in Table 1, rates of intimate partner abuse among both men and women residents were extremely high. (Twenty of 23 women reported being physically hurt by an intimate partner.) However, the women were more than four times more likely than the men to say they were badly injured during the abuse. In addition, women were much more likely than men to have been (1) threatened, (2) sexually abused, (3) stalked, and (4) physically hurt on numerous occasions by their intimate partners. Perhaps most important, as far as mental health implications are concerned, is the fact that the women were almost four times more likely than the men to say they experienced intense fear, helplessness, or horror during the abuse. (This subjective reaction must occur for an experience to be considered "traumatic" and result in PTSD).[19] Thus, it is clear that domestic violence is viewed differently by women in violent relationships than by their male partners.

Table 1.—Men and Women in a Residential Substance Abuse Treatment Program (on Oahu) Who Had Been Physically Hurt by an Intimate Partner

	Men (n-68)	Women (n=23)
Slapped, punched, kicked, beaten up, or otherwise physically hurt by an intimate partner	60%	87%
Badly injured during the abuse	7%	30%
Threatened with death or serious bodily harm by an intimate partner	20%	50%
Sexually abused by an intimate partner	3%	20%
Stalked by an intimate partner	10%	25%
Slapped, punched, kicked, beaten up , or otherwise physically hurt more than 8 times by an intimate partner	20%	50%
Intense fear, helplessness, or horror during the abuse	**17%**	**60%**

By identifying women who are in abusive relationships and making appropriate referrals, physicians are not merely addressing an acute problem of time-limited duration. They are seizing the opportunity to interrupt a cycle of violence that is often chronic and recurrent over a period of years in the absence of outside intervention. Among 50 women living in a shelter for battered women on Oahu, 81% indicated that the abuse had occurred over a period of one or more years, and the span of time between the first and last incident of abuse was four or more years for almost half of these women.[10] Very similar results were obtained with a combined sample of 168 Hawaii women attending support groups for battered women.[14]

Unfortunately, there is evidence that many physicians are unaware of the seriousness of the mental health consequences of domestic violence. For example, in a 35-page pamphlet on the "mental health effects of family violence" published by the AMA in 1995, PTSD was not mentioned even once.[20] Furthermore, PTSD symptoms of "emotional numbing" and "strong emotional and avoidant reactions" were only mentioned briefly, and only fleeting references were made to "unrecognized anxiety, depression, and other problems."[18] It is hoped this article will raise physicians' awareness of the terrible psychological and medical costs of domestic violence and will motivate physicians to screen for domestic violence on a regular and systematic basis.

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A Peaceful Society Begins with a Home Free of Violence



Pandora's Box: Open it and Pass it on! Victim Advocates can Bring Relief to Busy Physicians

Julie A. Owens, BA*

It is clear that physicians and other healthcare providers are becoming increasingly concerned about the short and long term health effects of domestic violence. Unfortunately, it is equally clear that most battered patients, especially those with no visible injuries, still fail to be properly diagnosed and referred to the abuse experts who can offer them safety and support. Discussing partner abuse with patients is frequently compared with "opening Pandora's Box" and is sometimes avoided by even the most concerned providers due to the time-consuming and complex issues involved. Regular abuse screening with on-the-spot support for identified victims must become routine procedure for physicians.

The well documented, potentially life-threatening effects of on-going abuse create a responsibility on the part of all physicians to become thoroughly familiar with assessment techniques and with community agencies that can begin helping identified victims before they leave the medical setting. Domestic violence programs offer a variety of specialized services which health care professionals typically cannot provide, such as comprehensive safety planning, protective shelter, restraining order advocacy, group support, supervised child visitations and legal assistance.

In this real world of back-to-back patients and little, if any, formal education on the topic, it is unrealistic and unreasonable to expect physicians to do it all. Nevertheless, it is imperative that individual doctors pursue basic domestic violence training. Physicians can easily learn to routinely assess for signs of psychological, sexual, and physical abuse, to interview victims sensitively, to thoroughly document injuries and symptoms, and to preserve evidence for legal purposes. But the most important role of the health care provider in terms of actual patient safety and support is in making appropriate follow-up referrals.

Contrary to what many physicians may fear, a major time commitment is usually not required to effectively address abuse with a patient and discuss the resources. "Quicker than you can put on a Band-Aid," says physician Anne Flitcraft of the University of Connecticut, "you can acknowledge the violence, you can assert that this is illegal, not her fault, and that a lot of women are in her situation. You can educate her about the community-based resources available to her, and ask 'Are you safe?'".

*HOPE Domestic Violence Consultants, Executive Director
Pacific Center for PTSD, Project Director, Trauma Survivors Project
Hospitality House Transitional Shelter for Battered Women and Children, Manager

Lyn Lee, a Hawaii abuse survivor and a social worker, has helped train medical students by sharing her experiences and her professional expertise. "For years I encountered medical professionals who were not informed about the issues that affected my health. More importantly, they did not know how to give me referrals. Doctors seemed reluctant to even discuss abuse. Fortunately, my present physician is very aware of the dynamics of domestic violence and has served as a significant support in my continuing healing process." Survivors routinely report that the best "medicine" ever prescribed for them was a referral to a support group where they met other battered women and were educated on the dynamics of abuse.

Any time abuse is supected by a health care provider, the patient should be offered the opportunity to speak with a victim advocate. If she agrees, then the Pandora's Box of issues can be turned over to experts who are trained to address each of her multiple safety, support, and legal considerations. Working with abuse victims, whether they are still in a relationship with their abuser or are being stalked or threatened by an ex-partner, is tricky at best. Safety and confidentiality can easily and inadvertently be jeopardized. When this happens, providers may lose the only opportunity they will ever have to help.

Advocates can encourage a patient to confidentially talk at length in an unpressured atmosphere, whereas health care providers are usually limited by time constraints. Because advocates are not mandated to involve the police or others, a victim can also speak freely without fear of retaliation from an abuser who might punish her severely for disclosing. The advocate will help the patient design a comprehensive, personalized safety plan. The victim will learn about her legal rights and what battered women can and cannot expect from the criminal justice system. Finally, her options will be discussed.

On Oahu, a system is available to provide immediate on-the spot crisis counseling for battered women in health care settings. Dr. Lisa Hendrickson, an Emergency Department physician with Kapiolani Medical Center at Pali Momi, has been an ardent supporter of the crisis team. "Sometimes I just don't have time to deal with the cases," she says. "For example, one night just recently I had three battered women show up in one hour. One had been beaten, sexually assaulted, held hostage for 24 hours and had children who had been left at the scene. Another was a sixteen year old whose boyfriend had knocked out some of her teeth for the second time. The third one claimed she had been assaulted by a stranger while jogging at 11:00 pm. She was pregnant. Of course, it was domestic violence. I couldn't possibly handle every detail of cases like these without outside support. Even if I could," she explains, "the victims are much more likely to listen and relate to someone else, especially a

Continued on Page 168



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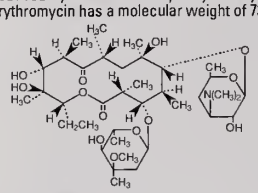
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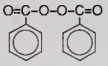
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Prior to dispensing, tap vial until all powder flows freely. Add the indicated amount of ethyl alcohol (70%) to vial (to the mark) and immediately shake to completely dissolve erythromycin. Add this solution to gel and stir until homogeneous in appearance (1 to 1½ minutes). Benzamycin Topical Gel should then be stored under refrigeration. Do not freeze. Place a 3-month expiration date on the label.

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Continued on From Page 166

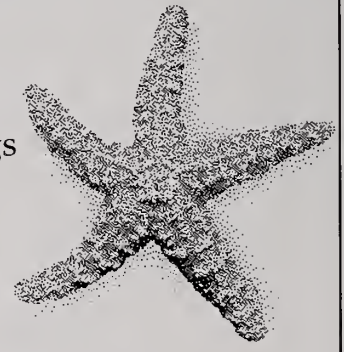
woman who has been in that position and who really understands what she is going through." **Oahu health care providers who want to access the current crisis team may call a digital pager 549-8462 (CBOP) Community-based outreach program—A crisis intervention service.**

Where on-call counselors are not available or when a patient prefers more anonymity, a simple phone call by the victim to the nearest battered women's shelter or counseling program will initiate the advocacy process. Patients will be offered information, counseling, and support over the telephone, and may afterwards decide to go straight to a shelter. Informative brochures which are available from domestic violence agencies, should be given to each female patient whether abuse is confirmed or denied. For women who cannot safely take a larger pamphlet home, the March of Dimes and the Hawaii Medical Association produce small, easily hidden *help cards* with local Hotline numbers.

Providers in the health care and victim advocacy fields can go a long way towards offering help and hope to abuse victims by working together and coordinating their efforts. Physicians can make their own jobs easier with one call that could mean the difference between life and death for their battered patients.

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Identifying Family Violence: A Community Prototype Incorporating Native Hawaiian Values and Practices

G. Noelani Wilcox, MS, RN, CNS; Laura Jean C. Armstrong EdD, MPH, RN

Background

One of the major public health problems facing both the nation and Hawaii is family violence. The report entitled *Current Status of Training Programs in Hawaii for Health Professionals on the Assessment of Family Violence*, March 1995, written by Susan Maley, reiterated that family violence is a leading cause of physical and psychological trauma and death for both women and children. More than half of the children whose mothers are battered are also victims of physical abuse. Families who experience family violence seek health care eight times more frequently than the nonviolent families.

The Hawaiian community was significantly affected by the abuse of its women and children. Hawaiian women's exposure to family violence was higher than their percentage in the total population of the state - 13.5% of population vs. 20% of victims (State Commission on the Status of Women, 1993). *The Hawaii Kids Count Data Book*, 1994, also reported that Hawaiian children were more at risk of abuse than any other ethnic group and that the rate of child abuse is 33% higher than their percent of population (18% of child population vs. 27% of victims).

Response: Manual on Identifying Family Violence

In 1994, the Community Health Nursing Division and the Queen Emma Foundation became partners in the development of a training manual* to identify family violence in a culturally sensitive manner. Published in 1996, the purpose of this manual, *Identifying Family Violence: A Community Prototype Incorporating Native Hawaiian Values and Practices*, was to design an approach to improve the identification of family violence cases by health care professionals and to encourage disclosure by families within the native Hawaiian community.

Our assumption is that a culturally integrated approach is a necessary component of a community's strategy to address this escalating problem. This manual is a pioneering effort which health care professionals can adapt, expand, or refine in their work with native Hawaiians. However, we believe the values and practices described in the manual have universal application and can be incorporated in one's work with non-Hawaiians as well.

*For information on obtaining the manual, contact Laura Armstrong, State of Hawaii, Department of Health, Community Health Nursing Division at 586-4131.

Basic Assumptions: Foundation of Manual

Assumptions which guided the development of this manual include the following:

About the Family

- Families are the foundation of a safer, non-violent society.
- Family members empower each other by practicing the true meaning of *aloha* on a daily basis.
- When any member of the family abuses another or is the object of abuse (spouse, children, elders, other dependent adults), the family's safety and ability to interact in the spirit of *aloha* is threatened.
- To preserve the *aloha* within the family and to create a safe environment for the rest of the members, they may need to physically remove themselves from the situation or may need to have the person inflicting pain removed from the home.
- The extended family may be able to provide *kokua* (help) so that all members have a safe place.
- Time away gives every family member an opportunity to rediscover the power within themselves and to regain control of their lives in a safe environment.
- Right actions occur when individuals within the family *ho o ponopono* "to make right" within themselves.

About Health Care Professionals

- Health care professionals are oftentimes the first persons in the community to whom a family will reach out.
- Health care professionals are in a pivotal position to discover, treat, and/or refer for help persons in family violence situations.
- When health care professionals approach family violence situations with an enlightened heart, their ability to help is enhanced.
- A health care professional develops an enlightened heart by engaging in practices that nourish his or her *aloha*.
- *Mana* is the spiritual life force which enables health care professionals to interact with others, including clients, in the true spirit of *aloha*.

About Cultural Integration

- A culturally sensitive and competent approach is recommended in family violence situations, particularly in Hawaii where the population is multicultural.
- The Hawaiian culture encompasses values and practices that can be applied universally to native Hawaiians as well as other populations.
- As the host culture, native Hawaiian principles, values, and practices should be incorporated into health care delivery for the benefit of our indigenous people.

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About *Pule* (Prayer)

Throughout the manual, *pule* is used as a means of seeking divine empowerment, guidance and inspiration. Developing an understanding of one's spirituality is inherent in the process of using *pule*. Religion is often the bridge to understanding one's spirituality.

Pule is an essential part of the ho o ponopono "to make right" process when violence has occurred, since there is a disconnection of ones spiritual being from the physical.

The manual acknowledges all practices and beliefs which assist health care professionals and their clients in this process of deepening spirituality.

The Process: *Hana Pono Ka Puuwai Malamalama* (The Enlightened Heart Acts Accordingly)

Personal insights into one's principles, values, and practices and that of the client or family assist the health care professional in working with family violence. Effectiveness is enhanced when the health care professional is able to develop *aloha* with the presenting family member. This process, therefore, was designed to emphasize caring communication from an enlightened heart. Phases in this process include: 1) *pule wehe* (to prepare); 2) the interview: encouraging disclosure, 3) the examination, 4) closure, and 5) *pule hookuu* (to release).

I. *Pule Wehe* (to prepare)

Health care professionals are in a unique position to assist families in crisis. Oftentimes they are the first persons outside of the family to find out about the violence. In order to be there for a family, the health care professional must demonstrate *hana pono ka puuwai malamalama* (an enlightened heart acts accordingly).

Malamalama or enlightenment occurs when one is in touch with mana (spirit). *Malama* (caring) is the root of *malamalama* (enlightenment). Acting with an enlightened heart means:

Watching not only with the eyes, but with the heart; listening not only with the ears, but with the heart; speaking not only through the voice, but from the heart; thinking not only with the mind, but with the heart; doing not only what protocol dictates, but what the heart guides one to do.

II. The Interview: Encouraging Disclosure

During the interview, building *aloha* and establishing trust is critical. Building *aloha* involves creating a sense of time. Take advantage of the time you have to nourish the client's *mana* by building *aloha* and establishing trust; this will facilitate the client's ability to connect with his/her internal clock and spiritual knowledge of the *ohana* family. Each visit is an opportunity for the health care professional to encourage disclosure; express concern for the well-being of all family members; and provide information about the danger of the situation, resources, and options. Several visits may be required before the client is ready to transform the family situation.

Building *aloha* involves creating a sense of place. Regardless of the setting (emergency room, doctor's office, clinic, or home), the interview must be conducted in privacy. Have another professional meet with any accompanying spouse, partner, or other family member, or friend especially if they appear uncooperative. Call security only as a last resort, as this may increase the risk of later violent retaliation against the client.

Building *aloha* involves creating a sense of space. Enhance the client's spiritual space by, for example, having the client use *ha* (breath cycle) to decrease distraction, recite a *pule* together or send forth a *pule* to the client in silence. Enhance the client's mental space by clarifying the purpose of the interview and what the client can expect from the health care professional; discuss confidentiality and its limits; avoid labeling. Enhance the client's emotional space by focusing on keeping self open in order to detect client concerns that remain unverbalized and to deal with any risks/dangers/fears; develop and use an assessment questionnaire as a routine tool to uncover family violence; be versatile in your interviewing approach.

III. The Examination

The examination is another opportunity to encourage disclosure. However, it is important to note that the examination also encompasses several medico-legal procedures which include:

Obtaining and documenting clearly and accurately the history of injury, conducting and documenting clearly and accurately the physical assessment, conducting and documenting clearly and accurately the emotional assessment, conducting and documenting clearly and accurately the assessment of present danger, collecting evidence, and treatment.

IV. Closure

The overall goals of establishing closure is to reinforce safety and empowerment by:

1. Reaffirming concern for the well-being of all family members.
2. Providing information about the danger of the situation, resources, and options.
3. Respecting the family member's chosen action.

V. *Pule Hookuu*: to release

After the client has left, the health care professional may make the transition to the next client by performing a cleansing ritual. As one is performing the handwashing ritual, consider reciting the following thought:

I am washing away any negativity or judgments attached to (name of client) and their situation. I, (health care professional), am cleansed, purified, and protected.

May all ties to (name of client) be cleansed and purified.

Remove all negative thoughts, emotions, and attachments whether known or unknown.

Summary

The manual, Identifying Family Violence: A Community Prototype Incorporating Native Hawaiian Values and Practices is a pioneering effort which health care professionals can adapt, expand, or refine in their work with Hawaiians and non-Hawaiians as well. Our assumption is that a culturally integrated approach is a necessary component of a community's strategy to address this escalating problem.

Family violence is a virus which threatens all of us. It weakens the *pohai ke aloha* (circle of *aloha*) which binds the family together. When the *pohai ke aloha* is weakened, each family member's *mana* (vital force) declines. When a familys *mana* is in decline, the *lokahi* (harmony) within the family and our community is disrupted.

We, as a community, a society, a nation, cannot afford to stand by and condone violence within the family. Ultimately, we all suffer when our families are hurting.

Hana pono ka puuwai malamalama.. An enlightened heart acts accordingly.

A Police Officer's View of Domestic Violence

Detective Bernie Campbell, Family Violence Detail, Honolulu Police Department

When I was a rookie officer with Honolulu Police Department (HPD) in 1975 responding to domestic violence cases, there seemed to be very little I could do at these situations. The Spouse Abuse law of 1973 permitted officers to arrest if the abuse was committed in their presence.

Frequently, I was looking at victims with swollen, puffy eyes; a bloody nose, bloodied mouth, or various marks on the face, neck or arms. I looked at frightened children, who looked back at me, expecting someone or something to help them.

All I could do was order the abusive ones (if they were married couples) to leave the home for a cooling off period of three hours. And I walked away. Sure, I made a police report; but not having a strong law and the authority to act, I could do little else. The perceived inaction conveyed to everyone in those families that this behavior was *acceptable* because there were no consequences to the batterers. Some of those children likely grew up to be this generation of abusers and victims. Now, as a detective in the Family Violence Detail of HPD, I am seeing them again in **all** kinds of police reports.

What we've learned in the past 20 years is that Domestic Violence is not only a "family matter" or "social" problem, it is a deadly **criminal** problem. Its ripple effect extends into crimes in our schools, our workplaces and our community. It destroys lives, families and communities, and is transmitted to the next generation to continue the cycle of destruction.

Current Law

Currently, Section 709-906 of the Hawaii Revised Statutes (HRS) makes it a crime to physically abuse a family or household member, defined as "spouses or former spouses, parents, children, and persons jointly residing or formerly residing in the same dwelling unit." This is punishable as a misdemeanor with a mandatory minimum two-day jail sentence for a first conviction; and a thirty-day jail sentence for a subsequent conviction within a year. Officers don't need to witness the offense to make an arrest. The law **authorizes** officers to make an arrest based on reasonable grounds.

The *cooling off period* has been extended to twenty-four hours or longer, if it's the weekend. The law further **mandates** an arrest of someone who refuses to leave the premises or returns prior to the end of the cooling off period.

Arrests went from less than 300 arrests in 1986 to nearly 3,000 in 1992!

HPD's #1 Goal

Chief Michael S. Nakamura has declared the reduction of domestic violence to be the Honolulu Police Department's (The Department) number one goal for 1996. The Department recognizes that an effective law enforcement response can reduce homicides, injuries and recidivism and convey a strong message that violence in the home is a serious crime that will not be tolerated.

The immediate goals of an effective response are to:

1) Stop the Violence
2) Increase Safety of Victims and Children and
3) Hold the Abuser Accountable.

Several strategies have been initiated towards the accomplishment of the Department's goals.

Policies

The Department's policy for enforcing the Abuse of Family or Household Member law (709-906 HRS) has been that of "mandatory arrest". This means that when officers have probable cause to believe someone has physically abused a family or household member, the officers **shall** effect an arrest on the perpetrator.

And most recently, the Department strengthened its policy on the issue of Restraining Order violations by directing officers to effect arrests for these violations of court protective orders whenever probable cause exists. Although restraining orders or TROs are not and never will be bullet-proof vests, this pro-active arrest policy certainly puts more "teeth" into the court orders as well as some immediate consequences for violators.

Training

In January of 1996, the Department began a mandatory two-day Domestic Violence Training for all field officers and supervisors to enhance their ability to respond effectively, safely and consistently to domestic violence cases. This intensive agenda is designed to provide officers with the most recent updates on domestic violence laws and procedures as well as understanding the complex dynamics of domestic violence and its impact on victims, children, abusers and the entire community. The curriculum addresses abuse of family or household members, child abuse, dependent adult abuse, custodial interference (parental kidnapping), court orders of protection, and community resources for victims of domestic violence. As of July, over 500 HPD officers have received the training, and generally, the response has been positive. It is anticipated that approximately 400 - 500 more will be trained before the training program concludes in January 1997.

Victim Assistance and Intervention

The Department recognizes that arrest alone cannot interrupt the cycle of violence and increase the safety of victims. Victims must be informed of the resources available in the community, particularly of shelters, the availability of restraining orders, legal advice, emotional support and counseling.

In February 1994, the Department, in conjunction with the Hawaii Emergency Abuse Response Team (HEART) through Parents and Children Together, has had a "DART" Project (Domestic Abuse

Response Team), consisting of a counselor and an officer. They respond to domestic violence scenes to offer crisis intervention services to victims. Victims receiving DART interventions were tracked by the Prosecutor's Office and were noted to participate more in prosecutions to obtain needed counseling/assistance for their abusive partners. Victims also reported a more positive perception of the police. Additionally, department policy directs officers to make every effort to provide victims with information via a "HELP" card, printed by HPD, which lists the resource agencies for victims to contact, or by connecting them to available community projects such as DART.

A new Grant Project will extend the DART concept by the end of 1996 by providing a "one-stop shop" for victims, where a variety of services will be made available within one location.

Statistics

Recently the Hawaii State Attorney General's office released the results of a study of domestic violence related homicides in Hawaii from 1985-1994.*

Table 1: Cases: Domestic Violence-Related Homicides in the State of Hawaii by County; 1985-1994.

County	Number of cases	Percentage
Hawaii	31	22
Honolulu	95	69
Kauai	4	3
Maui	8	6
Total	138	100

Table 2: Domestic Violence-Related Homicides in the State of Hawaii by Circumstance, 1985-1994.

Circumstance	Number	Percentage
Domestic argument	56	36
Child abuse	20	13
Other argument	16	10
Love triangle	15	10
Break up	12	8
Divorce	10	6
Unknown	10	6
Other*	5	3
Under the influence of drugs	4	3
Psychiatric problems	3	2
Gagged to keep from crying	2	1
Revenge	1	1
Total	154**	99

Note: Percentage do not total 100 due to rounding.

*Includes arguing over the offender's advances, throwing over a cliff after rape, arguing over victim's girlfriend, killing to demostrate to the offender's girlfriend her fate if she left him, parents arguing—offender attempted to shoot father but shot mother instead, burning down residence while victim was still inside.

**Includes the circumstances of all homicides for all offenders and victims.

Table 3: Victims: Domestic-Related Homicides in the State of Hawaii by Sex, Age and Race, 1985-1994.

Sex	Number of victims	Race	Number of victims
Male	55	African-American	2
Female	93	Caucasian	49
		Chinese	1
		Filipino	34
Age			
5 and under	24	Hawaiian	25
6 - 14	5	Japanese	11
15-10	12	Korean	2
21 - 25	16	Samoan	4
26 - 30	12	Unknown Asian	16
31 - 35	29	Unknown	4
36-40	14		
41 - 45	7		
46 - 50	16		
51 - 55	6		
56 and older	7		
Total	148		

Table 4: Offenders: Domestic Violence-Related Homicides in the State of Hawaii by Sex, Age and Race, 1985-1994.

Sex	Number of victims	Race	Number Offenders
Male	122	African-American	9
Female	19	Caucasian	54
		Filipino	27
Age			
15 - 20	20	Hawaiian	26
21 - 25	20	Japanese	7
26 - 30	25	Korean	1
31 - 35	20	Samoan	5
36 - 40	18	Unknown Asian	11
41 - 45	13	Unknown	1
46 - 50	12		
51 - 60	6		
61 and older	7		
Total	141		

Making a Big Difference

In past years, police officers have been justifiably criticized for their weak response to this most confusing and frustrating crime. But as we've learned more about the complex dynamics involved, and the current research about what **really** works, we have a clear vision of our pivotal role in making a big difference by our proactive response to domestic violence cases.

But the job is not ours alone, nor that of the Criminal Justice System only. Our **entire** community needs to join together in sharing the responsibility, collaborating in the solutions, and committing their efforts and resources to ending domestic violence.

Help us! **Together we make a big difference!**

*Hawaii Crime Brief, Dept. of the Attorney General, Crime Prevention and Justice Assistance Division. April 1966. Permission for reprint granted. Note: Number of cases vary in Table 1 from Tables 2 and 3 is due to the variable of more than one victim or more than one offender in a case. In Table 3 some homicides were due to multiple circumstances.

The Community-Based Outreach Program A Vital Resource for Medical Professionals Working with Victims of Domestic Violence

Catherine A. Bruns MA, MFCC, Program Supervisor; Debbie Garcia, Program Coordinator

The U.S. Surgeon General reports that battering is the single-most common cause of injury to women resulting in more injuries than automobile accidents, rapes and muggings combined. The American Medical Association reports that 22% to 35% of all emergency room visits by women are caused by abuse. In Hawaii, almost 100,000 days of hospitalization, 30,000 emergency room visits, and 40,000 trips to the doctor every year are the result of domestic violence. Medical professionals are often the first point of contact for battered women. Those in the medical profession are adept at healing the physical wounds and ailments, but often don't know how to begin to heal the emotional injury or to help a woman become safe. Doctors, nurses, and other medical personnel may be intimidated by the subject of domestic violence, as are many others. The Community-Based Outreach Program (CBOP), a program of Parents and Children Together (PACT), can offer vital assistance for medical professionals who are treating battered women.

CBOP is a service which provides crisis intervention, education, support, information and community referral to victims of domestic violence. A trained and highly skilled domestic violence counselor will meet with a domestic violence victim at any safe location, including hospitals, physicians' offices or any other community location. Safety, for client and counselor, is primary, thus CBOP counselors will not meet clients in their homes. If no safe location is available, or if the client prefers, counseling is provided by telephone.

Historically, the CBOP phone number was available only to referring professionals. Currently, however, in an effort to reduce barriers for battered women to obtain assistance, CBOP will accept referrals from both professionals and clients. This also makes it easier for medical professionals, as the CBOP number and information can be given directly to the patient, and she can call at her convenience. However, CBOP welcomes referral calls from medical professionals as the information provided by physicians is often extremely helpful.

CBOP began in July of 1995 and since that time has served more than 150 community-referred victims of domestic violence. CBOP's objective is to empower and educate those who have been victimized by domestic violence. Crisis theory, which the program is based on, says people are more amenable to change during a time of crisis. CBOP, therefore, responds during these crisis times with the intention of providing the tools and resources for change. For many clients, this is the first time they have received information about the cycle of violence. With more information, battered women are better equipped to take steps to ensure the safety of themselves and their children. During an intervention, the CBOP counselor assesses the client's situation and provides intervention based on the nature of a client's crisis. The client's safety is considered foremost, thus the counselor will always create a safety plan with the client whether she is able to leave the violent situation or not.

CBOP is a vital resource for physicians. Victims of domestic violence who seek primary care from their personal physicians and from emergency rooms will have the opportunity to speak with a trained professional about the violence plaguing their lives.

A CBOP counselor may be reached by calling the voice mail pager at (808) 549-8462. A counselor will return the call within five minutes. CBOP services are available Monday to Friday 8 am to 1 am, and Saturday and Sunday, 5 pm to 1 am.

An Intervention Model for Child Witnesses of Domestic Violence

Jerry Coffee BS and Allana Wade Coffee, MSCP
PACT Family Peace Center

The PACT Family Peace Center Children's Program has provided psychoeducational group and individual counseling for child witnesses of domestic violence since 1990.

Definition

The PACT Family Peace Center defines domestic violence as an intimate partner's systematic attempt to gain or maintain power and control over another person through intimidation, manipulation, humiliation and violence. Physical abuse is only one part of a whole system of abusive behavior. Emotional abuse, physical and social isolation, economic abuse, sexual abuse, using children as leverage, threats, male privilege and intimidation are other parts of the system of abuse.[1]

The act of *witnessing* violence includes both seeing and hearing physical, emotional, verbal, sexual abuse or property damage. The act of experiencing violence refers to being physically, emotionally, sexually abused or neglected.[2]

Emotional abuse and neglect can be equally impacting as physical abuse.[3] The PACT Family Peace Center provides intervention for children who have witnessed and/or experienced family violence.

Prevalence

Nationally, women experience an estimated 572,000 acts of violence by their male intimate partner. In 1993, the Hawaii State Commission on the Status of Women estimated that 49,000 women in the State of Hawaii are victims of domestic violence. This was considered a conservative estimate.[5]

It is estimated that approximately 90% of children living in violent homes are aware of the violence.[6] If 49,000 victims have an average of one child, then approximately 44,100 children in Hawaii have witnessed domestic violence.

Clinical Considerations

There are three major clinical areas to consider:

1) the child witnesses' development of aggressive behavior,
2) posttraumatic stress disorder, and
3) altered relatedness.[7-8]

These issues may effect the normal physical, moral, and cognitive development of school age children and toddlers.[3]

Posttraumatic Stress Disorder (PTSD) and Health Related Problems

Child witnesses of domestic violence may experience PTSD symptoms, which include a restricted range of affect, a sense of foreshortened future, difficulty sleeping, difficulty concentrating, hypervigilence and exaggerated startle response.[8] Some health related problems include allergies, headaches, stomach problems, asthma, enuresis, and phobias.[7]

Altered Relatedness and Problems in relationships

Exposure to family violence may contribute to a child's ability to establish significant trusting relationships.[9] A parent's chronically inconsistent emotional or physical availability adds to the child's anxiety and uncertainty which may lead to mistrust and poor ability to empathize.[8]

Aggressive Behavior

Children who have been abused or neglected are 38 percent more likely to be arrested for violent crime than nonabused or non neglected children.[10] Children who witness chronic violence may also become desensitized and tolerant of violence[11] and self-blaming.[12] They may also develop gender-rigid and distorted beliefs and attitudes which may result in rationalizations involved with being a perpetrator.[13]

Intervention

One effective intervention is a psychoeducational group which challenges the child's beliefs and attitudes about aggressive behavior and family violence. This group also facilitates the learning of appropriate nonviolent skills for conflict resolution.[13] PACT Family Peace Center's groups are psychoeducational. They were designed to provide an emotionally safe and consistent environment within which participants can share and examine their beliefs and attitudes about aggressive behavior and family violence. PACT Family Peace Center's counseling approach is culturally relevant and sensitive to the needs of Hawaiian Pacific Islanders as well as other populations.

Children's Groups

Group Process

PACT Family Peace Center defines the group process as a combination of the relationships that members establish with each other, the facilitator, as well as the nature in which members integrate group content. Chronologically, group process refers to the events occurring in an individual session as well as the collective, therapeutic sequence of a 15-week cycle.

Children's groups are limited to ten to fifteen participants and two to three adult facilitators. The small group size allows the children to bond sufficiently and to maintain a consistent environment. The group process involves a continuum of sequential healing that includes:

- Trust building
- Acknowledging violence and validating feelings
- Healing
- Discovering new ways of coping with violence and
- Integration.

Trust Building

While trust building is the initial stage in the group sequence, it is frequently a recurring phase. Group discussion and activities, which work to align members to each other, may occur at any point in the group sequence. Validation by peers and facilitators specific to the trauma of witnessing violence appears to provide comfort to participants. The group experience is designed to normalize participant's reactions to violence and to diminish isolation, thereby increasing self-trust.

Acknowledging Violence and Validating Feelings

Children often learn to minimize, to blame themselves or the victim and to deny abuse and violence they have witnessed or experienced.[9] Participants are encouraged individually and as a group to examine different types of abuse, which include emotional, verbal, physical, sexual and property damage. The goal of acknowledging the violence and validating the child's feelings and experiences, is to decrease their shame and personalization of the abuse.[13]

Healing

Trauma is a common effect of witnessing and experiencing abuse and violence.[8] Common symptoms associated with trauma include cognitive distortions which are assumptions and faulty beliefs that often lead to impaired self-esteem.[13] Children displaying trauma symptoms often form rigid, dichotomous or "black and white" images of the world and themselves. The group sessions are designed to help children process and discard beliefs that minimize their range of coping. Participants are taught that violence may be intergenerational and are encouraged to choose to live non-violently.

Children who witness the abuse of a parent for prolonged periods of time may develop feelings of powerlessness and an inability to recognize choices.[13] These feelings may be further reinforced as women and children encounter a system which often appears to excuse violence or fails to keep victims safe. Children's groups work to instill both personal power and awareness of choices regarding personal safety and behavior.

Discovering New Ways of Coping with Violence

Typically, child and adolescent victims and witnesses of domestic violence respond to conflict with either extreme externalized or internalized behaviors.[8,13] Parents often request immediate skill building for their children in the area of anger management. It appears that group participants are rarely willing to discuss and integrate positive behavior in initial or even mid- group sequence. They seem to first find congruence and validation in information specific to their own experiences with family violence. As children make connections between their own behaviors and the violence they have witnessed, they become more willing to explore proactive versus reactive responses.

Often, children and adolescents who have been traumatized by domestic violence exhibit a cluster of symptoms associated with attention deficit.[3] Parents learn that as children adapt to the continual crisis of domestic violence, a specific pattern for life style and personality develops. Being "in crisis" and the energy or "rush" which it provides become the primary focus or impetus for being engaged in life. After having been conditioned to this rhythm, children may re-create the "rush".

Anger management concepts in the group refer to the concept that families and individuals experience anger and violence in a cycle. This cycle includes a ***honeymoon*** period, a ***tension building*** period and an eventual ***explosion*** period. Group members learn to recognize tension building in their family and themselves. Group discussion and activities work to move children closer to being conscious rather than unconscious of feelings and behaviors. Group focus on tension building assists children in learning to keep safe and out of violent situations as adults move from tension building to explosions. Children are taught that explosion or conflict is a part of life.[15] However, violence and abuse need not be inherent in conflict. An explosion need not be violent. Discovering new ways focuses on identifying healthy, nonviolent conflict resolution skills, including time-out.

Hypervigilance, the constant scanning of the environment for physical or emotional hostility, is also a symptom of trauma. It is a coping skill that reinforces an external focus and locus of control, which may lead to learned helplessness.[16] This curriculum is designed to teach the participants to develop an internal locus of control and **self** reference.[8] By creating a safe and consistent environment, the group encourages children to refer and attend to their feelings and thoughts.

Children who grow only in response to an external locus of control remain at risk for perpetuation of the cycle of violence.[17] Evidence that group members have begun the process of integrating self reference includes taking responsibility for their own actions, attention to body cues, reference to and use of safety plans.

Integration

Throughout the group cycle, participants are provided with opportunities to integrate the curricula with their personal experiences. Although the group curricula is a sequential design, certain topics are recurrent. Trust and safety issues frequently require additional time to process and address. The 15-week cycle is a modest period of time considering the length of time that clients have been exposed to abuse and violence.

Parent Group

Children who have witnessed abuse and power imbalances among adult family members need to experience the family system differently if they are to heal.[9] Parental support is highly recommended. Therefore, children 13 years and younger are not accepted to the Children's Program without their parents participation in both adult support group and a parent group.

The parent's group and children's group concurrently address the same issues. Communication between children's group facilitators and the parent's group facilitators is constant. Parent motivation and insight appear to be at their fullest potential as a result of the validation and support generated in the parent group. This provides them with the opportunity to offer continuing and appropriate support to their children. Because the parent's curriculum is based on the premise that violence is never appropriate in disciplining children, nonviolent discipline and parenting skills are taught.

An awareness of the effects of witnessing violence may elicit in parents feelings of guilt and shame about being a "bad" parent.[9] The parent group provides a nonjudgmental environment for parents to explore parenting issues that relate to the effects domestic violence has had on their children. Within the group there may be former victims and former perpetrators who are brought together under the mutual concern of understanding their children's experiences and helping them to heal. Parents are encouraged to let go of shame and guilt by replacing them with new skills and support.

Program Evaluation

The Children's Program uses a multi-axial approach to assessment and evaluation. They include interviews, house-tree-person

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drawings, the Child Behavior Checklist and a Group Interaction Client Assessment (GICA).

The Child Behavior Checklist (CBCL) assesses parents' perceptions of their child's behavior by responding to a 113 item questionnaire relating to potential behavior problems. The Children's Program has been using the CBCL as a pre and post test measure of program effectiveness.

The GICA is a pre and post test that uses a Likert Scale to measure aspects of the healing process from 1 (poor) to 5 (very high). The GICA is administered immediately following the intake assessment and again following the 15-week group cycle. Each item is scored on the basis of observable behaviors and self-reports of the child. The GICA attempts to assess client development in self esteem, safety, understanding of domestic violence, anger management skills, and social relationships.

Preliminary examination of the data suggest a significant decrease in externalized behavior upon completion of the group cycle. Additional research is currently being conducted.

Conclusion

The literature indicates that witnessing domestic violence can produce cognitive and social delays in childrens' development, increase their potential for violent and aggressive behavior, limit their ability to establish trusting and empathetic relationships and perpetuate the cycle of violence. The purpose of the Children's Program is to provide participants with the support and tools they require to interrupt and stop the intergenerational cycle of violence.

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PACT

Parents and Children Together
1475 Linapuni Street, Suite 117A
Honolulu, Hawaii 96819

847-3285

- **Domestic Abuse Response Team (DART) on call w/ HPD**
 Crisis intervention, Counseling in Partnership with Honolulu Police Department
- **Community-based Outreach Program (C-BOP)**
 Pager 549-8462
 Crisis intervention with victims in any location except the homes
- **Family Visitation Center 847-0015**
 A safe neutral setting for children to visit with their parents or to make transitions from one parent to the other

Family Peace Center

845-1445 938 E. Austin Lane, Honolulu, Hawaii 96818

- **Domestic Violence Intervention & Prevention**
 - Men's Program Komo Mai
 Teaches non-violent skill and values
 - Women's Program Maluhia O Wahine
 Support group in healing and taking steps to stop victimization
 - Children's Program
 Support group for children witnesses of domestic violence
- **Community Education**
 - Covers power and control issues
- **PreMediation Counseling**
 - Makes assessments of non-abusive situations. Prepares women and men to go into mediation process

NOTE: PACT and FAMILY PEACE CENTER have merged and FPC is now under PACT. Their offices will continue to be separate.



Hawaii Medical Association Alliance

STOP AMERICA'S VIOLENCE EVERYWHERE

Domestic Violence Clearinghouse and Legal Hotline (DVCLH)

Julian Leigh, Community Educator

Advocates

The Legal Hotline

It was the first call of the day.

"Domestic Violence Legal Hotline. This is Chris. Can I help you?"

She began speaking in a clear, confident voice. "A friend told me you help women who are afraid. Is that right?"

"Yes. Are you safe?"

Silence. Then she sobbed. "No, I'm not safe. I'm very, very scared."

Two attorneys, three paralegals and University of Hawaii pro bono law students staff the Legal Hotline. They express their concern for frightened callers, then tell them about their legal rights and choices and the consequences of those choices. Legal Hotline callers are often facing the most difficult decisions they will ever make.

Last year DVCLH answered 3500 Legal Hotline calls—calls from women and men who needed help and/or information.

Family Court Cases

Terminating a relationship with an abusive partner can be a complex and dangerous process. Batterers typically do not *let go* easily. DVCLH understands the dynamics of domestic violence. Staff knows how the laws and the *system* in our state can protect and support victims. DVCLH attorneys and paralegals provide divorce and post decree legal services.

Within 15 days after a Temporary Restraining Order is issued, a victim must return to court and face her abuser. The duration, terms and conditions of the protective order, as well as temporary child custody and visitation rights may be decided at this hearing. DVCLH attorneys represent victims at this proceeding.

Last year DVCLH represented 493 battered women in Family Court and served 1107 children, helping them and their mothers get free and safe.

Persons in Need (p.i.n.) Grants

She had a master's degree, a good job and made much more money than her abusive husband. From the shelter she called DVCLH to ask for financial assistance. Rather than risk abuse, she had turned over her paycheck to him. Now she needed help with a rental deposit on a new home for her and her children.

Oahu battered persons can call DVCLH for financial help with rent, utilities, medical and other emergency expenses. These grants, intended to help victims get safe and rebuild their lives, are generously provided through The Hawaii Community Foundation by the James and Winifred Robertson Memorial Fund.

In 1995 DVCLH provided 85 battered women with financial assistance.

Domestic Violence Task Force

DVCLH facilitates Oahu's DV Task Force, organized to improve our community's response to partner abuse. Caller I.D., police and judicial response, and batterer psychoeducational program guidelines are some of the topics addressed by the 20+ member Task Force. H.E.L.P., *Handbook of Emergency and Life-Support Programs* - a comprehensive directory of Oahu resources for victims of domestic violence - was produced in 1995.

5,000+ H.E.L.P. Handbooks have been distributed to doctors, attorneys, police, and other city and state service providers.

System Reform

DVCLH's Executive Director continues to be an expert witness for both defense and prosecution in domestic abuse cases. She has also been elected to the boards of Alliance for Health and Human Services and Hawaii Women's Political Caucus. She was appointed by the Governor to serve on the Sexual Orientation and the Law Commission. Each year she helps draft and support the passage of laws to protect women and children.

Educates

Training

DVCLH Community Educator and Executive Director make statewide and national presentations. DVCLH is fully funded to provide free training for service providers.

Last year DVCLH spent 814 hours out in the community - educating police, social service professionals, civic groups, teens, immigrants, and students. DVCLH produced and distributed 13,611 brochures for victims, 3,871 brochures for batterers and 7,815 Advocacy in Action newsletters statewide.

Consulting

DVCL2H shares what it has learned about domestic abuse - with government officials, public and private sector service providers and the media.

In 1995 about 1600 phone calls and 516 hours involved consulting.

Public Awareness

Every time partner abuse takes a life in the state of Hawaii, DVCLH, City & County of Honolulu, Catholic Charities and AmeriCorps cosponsor Oahu's silent march: Remember the Dead. Cherish the Living. Part of a national domestic violence public awareness effort, Clothesline Project Hawaii is cosponsored annually by DVCLH and the City and County of Honolulu.

Through collaborative efforts with the City and County of Honolulu, and with funding from First Hawaiian Bank Foundation and the U.S. Dept. of Health and Human Services, in 1995 DVCLH

Continued on Next Page

Domestic Violence Clearinghouse and Legal Hotline (DVCLH)
Continued From Page 177

launched a *Plan for Your Life* public awareness campaign.

Radio and television public service announcements, brochures, posters, bus posters, and over 200 hours of on-site trainings have all emphasized domestic violence doesn't just wound and scar its victims - emotionally, spiritually, physically. Domestic violence kills. Our community must help victims "Plan for Their Lives."

Administrates

Hard work doesn't always feel that focused or seem that important and noble—typing, faxing, meeting, writing, phoning, filing, budgeting, xeroxing—day in and day out. And when budgets get cut and battered women continue to die, sometimes hard work seems to be wasted.

Certainly, the task at hand is formidable. The hard work is about stopping violence and oppression. But the mission is ever clear.

DVCLH, sister agencies, and countless women and men all across the state together are sculpting a new society - where women, children and men are safe and cherished.

Domestic Violence Clearinghouse AND Legal Hotline 531-3771

Domestic Violence Clearinghouse and Legal Hotline

is a private non-profit agency providing direct legal services to clients, legal information and consultation to the community, and advocacy for system reform.

DVCLH began offering legal hotline services in 1988. Now, in addition to the Hotline, we have dramatically increased our services to include legal representation, development of training materials, community education, technical consultation and system advocacy.

Legal Representation
531-3771
- Divorce actions
- Restraining order actions
- Post-decree relief

Advocacy
534-0040
- Leadership in system advocacy and reform
- Work with the courts, legal community, police and legislature to improve system response in our community.

Education
"The Right to Know"
534-0040
- Brochures
- Videos
- Handouts
- Quarterly newsletters
- Free classes and training about domestic violence and system response

If you are a victim of partner abuse
Call 531-3771
or 1-800-690-6200
from the Neighbor Islands
Monday - Friday • 8 am to 5 pm
The violence won't go away.

Growing to meet all your healthcare needs

St. Francis Healthcare System of Hawaii

- Obstetrical and Gynecology Services
- Women's Addiction Treatment Center of Hawaii (W.A.T.C.H.)
- The Heart Center, including Heart Surgery, Specialty Cardiac Catheterization and Cardiac Rehabilitation
- Hawaii's only Transplant Center, specializing in heart, kidney, liver, pancreas and bone marrow transplants
- Centers for Diabetes and Liver Disease
- Advanced Diagnostic Imaging, including MRI
- Renal Institute - largest hospital-based dialysis program in the nation
- Cancer Institute - Radiation Oncology, Cancer Screenings, Cell Separator and Tumor Registry

St. Francis Medical Center
Honolulu 547-6011

St. Francis Medical Center - West
Ewa Beach 678-7000

Since the 1927 founding of St. Francis Hospital in Nuuanu Valley, our ohana has been growing to meet the diverse health care needs of Hawaii's people. Now, with two state-of-the-art Medical Centers on Oahu and an array of community services, including Hospice care, St. Francis Home Care, Health Services for Senior Citizens and parish nurses, we really are where you are when you need us.

Domestic Violence Help and Support Services Telephone Directory

24 Hours except when indicated

*Other Legal Help through Legal and Society Office

Services	East Hawaii	West Hawaii	Kauai	Lanai	Maui	Molokai	Oahu
Police	911	911	911	911 8 am to 4 pm	911	911	911
Emergency Shelters for Domestic Violence Victims and Their Children	959-8864	322-7233 322-2799	245-6362	565-9566 8 am to 4 pm Referral only	579-9581 Women Helping Women	567-6888 Hale Hoo Malu Shelter	Military 533-7125 Honolulu 841-0822 Ewa Beach 841-0822 Windward 528-0666
Suicide/Crisis Helpline	959-8400	329-9111			244-7407		521-4555
Sex Abuse Treatment Hotline	935-0677 Island wide	935-0677 Island wide	245-4144 YWCA of Kauai	242-4357 Call Collect	242-4357	242-4357 Call Collect	524-7273 Waianae 696-7081
Crises Outreach Team meet with Victims anywhere except Homes					242-7407		Pgr 549-8462 M-F 8 am to 1 am Weekends 8 pm to 1 am
Child Protective Service	933-4010 Kau 929-7336 Honokaa 775-0573	329-9344 Kamuela 885-6305	241-3320 274-3320	565-7271	243-5484	553-3681	832-5300
National Domestic Hotline Counseling & Referral	1-800-799-SAFE	1-800-799-SAFE	1-800-799-SAFE	1-800-799-SAFE	1-800-799-SAFE	1-800-799-SAFE	1-800-799-SAFE

Business hours as indicated

Legal Help*	1-800-690-6200 Domestic Violence Clearing House Legal Hotline (DVCHILH)	1-800-690-6200 Domestic Violence Clearing House Legal Hotline (DVCHILH)	1-800-690-6200 Domestic Violence Clearing House Legal Hotline (DVCHILH)	1-800-690-6200 Domestic Violence Clearing House Legal Hotline (DVCHILH)	1-800-690-6200 Domestic Violence Clearing House Legal Hotline (DVCHILH)	1-800-690-6200 Domestic Violence Clearing House Legal Hotline (DVCHILH)	531-3771 Domestic Violence Clearing House Legal Hotline 839-5200 AmeriCorps SAVD
Support Groups Counseling Alternative to Violence programs	969-7798	326-1607	245-5959 YWCA of Kauai 245-5914 Child and Family Service	565-9566	242-9559 Family Peace Center 877-6888 Child and Family Service	533-3202	Child & Family Sv 532-5100 Leeward Outreach Prg 681-5903 Family Peace Ctr 845-1445 Cath. Charities 536-1794
TRO	969-7798	322-6090	245-6362 YWCA of Kauai	242-4335 Call Collect	242-5995	533-3202	538-5959
Counseling Sex Abuse Treatment Business Office	935-7141	334-0308	245-5959 YWCA of Kauai		242-4335	242-4335 Call Collect	973-8337
*Other legal help through Legal Aid Society Offices	961-2851	323-9134	245-4728	565-6089	244-3731	553-3251	536-4302

Phone number were confirmed to be correct at press time. Changes may be made without advance notice.

Council Highlights

August 2, 1996
Roger Kimura MD, Secretary

The meeting was called to order by Dr Carl Lehman, President at 5:33 pm.

Those present were J. Spangler, President-elect; R. Kimura, Secretary; L. Howard, Treasurer; F. Holschuh, Immediate Past President; AMA Delegates: C. Kam, R. Stodd; AMA Alternate Delegate: A. Kunimoto; Speaker: H.K.W. Chinn; County Presidents: P. Blanchette - Honolulu, E. Bade - Hawaii; M. Joshi - Maui; T. Smith - W. Hawaii; Councilors: T. Au, D. Canete, P. Chinn, W. Dang, Jr., P. DeMare, C. Kelley, J. Betwee, P. Kim, C. Kadooka; Past Presidents: W. Chang, W. Dang, J. Lumeng, J. McDonnell, S. Wallach, Young Physicians Delegate: C. Goto.

Guests: Gladys Yamashiro - AETNA™ Medicare, and Walter Shim, M.D., Honolulu Symphony.

HMA Staff: J. Won, B. Kendro, J. Asato, L. Tong, P. Kawamoto, A. Rogness-recording secretary.

Minutes: The minutes of the July 13 meeting were approved as corrected.

- Dr Lehman introduced Gladys Yamashiro who informed Council that the Aetna™ Executive committee announced their withdrawal from the Medicare program throughout the U.S. as of October 1997. Aetna™ will continue to service claims during the transition period which will take about 6 months. A letter will be sent to Ms. Elizabeth Abbott, Regional Administrator of HCFA, Bruce Vladeck Jr., Administrator of HCFA and Robert Bath, Pacific Area Representative of HCFA expressing concern for retention of a local office.
- Dr Lehman reported: 1) The HMA Executive Officers met with HMSA who reported that they are planning to revise the participating physicians agreement and administrative operating procedures by October 1996. HMA legal counsel will keep the council abreast of the developments. 2) Mr Bruce Balfe, AMA's Strategic Planner, will come to Hawaii to do a strategic planning session. A cross section of physicians along with the Officers will attend the session. 3) A seminar will be held on No-Fault and Worker's Compensation. HMA Officers and Mr Won interviewed a person who was interested in recruiting members for the HMA but felt the person was not suitable for the position. 5) The Hawaii Health Council will sponsor a meeting addressing alternative dispute resolutions in November for HMA members as well as other health care workers. 6) September is declared Women's Health Month and the Hawaii Medical Journal is preparing a special issue addressing women's health and domestic violence. 7) Annual reports are due by August 26, 1996 and Resolutions by September 17, 1996. 8) He continues to meet with an adhoc committee regarding a single point of entry in long term and disability care. A report is planned for the end of this year.

X-CLAIM-!

Billing Center/ Clearing House!

Providing Hawaii Physicians & Dentists with electronically processed medical insurance claims. Offering a 7 to 21 day turnaround time on all electronically processed insurance claims, with less than 1.5% rejection rate, often resulting in 1/2 the current in-house expense. Also providing additional practice management support in the form of simultaneous patient billing, aged balance reports, practice analysis and profile reports, Superbills...arrears reports, monthly statements & custom report generation. If you would like to talk about reducing costs associated with these services, please phone, fax or write to:

X-CLAIM! Billing Center
Attn: Anthony L. Schweitzer
433 Niu St. #21 Honolulu, HI 96815
Office: (808) 955-2340
Fax: (808) 944-4908

For Action

1) Council approved Dr Walter Shim's request of Dr Sam Wong becoming an honorary member of the HMA, given no objection by the HCMS Membership Committee.

2) Council voted to work with any credible organization who proposes to become the EQRO for the Hawaii QUEST program.

Component Society Reports

Honolulu.—Dr P. Blanchette reported: 1) the HCMS is having a series of meetings at hospitals where nonmembers are invited. They will discuss Peer Review and how complaints are handled with a legislative update on what is current and what is likely to come up at the next legislative session.

Kauai.—Dr P. Kim reported the next county meeting will be on Saturday, September 7th. The members of the Kauai County are willing to help the HMA in any aspects necessary fro the HMA Annual Meeting on Kauai.

West Hawaii.—Dr T. Smith reported: 1) That their County will have a joint East-West meeting. 2) The County is waiting to see what kind of action will stem from the AMA Federation Reorganization Report.

Hawaii.—Dr E. Bade reported that the last County meeting was July 25 with 40 physicians in attendance with speakers, Dr John Heaster who spoke on depression and Dr Bade who spoke on tuberculosis. The county also had a family picnic which was well attended.

Maui.—Dr M. Joshi reported : 1) That their County met a couple of weeks ago with a speaker who wrote a few books on alternative medicine. 2) With the new changes in Worker's Compensation there are independent provider organizations being set up.

For Information

Credential Information Verification Service (CIVS): Mr Won reported that marketing packets have been sent out to hospitals and organizations.

Urban Institute.—Representatives from the institute will attend an August 6 meeting at the HMA to hear comments from physicians on the QUEST program.

Patient Right to Know Act 1995.—Mr Won reported that there are coalitions on the mainland whose purpose is to foster the idea that patients in managed care plans have the right or need to know in writing what benefits are covered and what is not covered. HMA will meet with coalition representatives in September.

Tobacco Task Force.—The Tobacco Task Force and HMA Officers met with Michael Fiore, a professor who just finished compiling clinical practice guidelines for the Dept. of Health and Human Services. A compendium of different literature which is available to physicians at no cost. The Task Force will seek to have the compendiums available for physicians at the HMA Annual Meeting on Kauai in October.

AMA Delegates Report.—The AMA Speakers Report provided the highlights of the meeting. The Hawaii delegation's resolution on tobacco was one of the highlights listed. Council gave Dr John McDonnell a round of applause for his dedicated work on the Tobacco Task Force and providing a well received resolution. Drs Calvin Kam, Russell Stodd and Allan Kunimoto also received a round of applause for representing the Hawaii Delegation at the AMA meeting.

Meeting was adjourned at 7:47 p.m.

When you turn to a specialist, turn to Straub.



Allergy, 522-4310
Cardiology, 522-4222
Chest Diseases, 522-4522
Dermatology, 522-4360
Endocrinology, 522-4344
Gastroenterology, 522-4233
Geriatric Medicine, 522-4344
Infectious Diseases, 522-4511
Joslin Center for Diabetes at Straub, 522-4342
Neurology, 522-4231
Neurosurgery, 522-4476
Nuclear Medicine, 522-4501
Obstetrics/Gynecology, 522-4420
Occupational Health, 522-4441
Oncology/Hematology, 522-4333
Ophthalmology, 522-4430
Orthopedics, 522-4232
Otolaryngology, 522-4530
Pathology, 522-4230
Pediatrics, 522-4410
Plastic & Reconstructive Surgery, 522-4370
Psychiatry & Psychology, 522-4521
Radiology, 522-4221
Rheumatology, 522-4522
Surgery, 522-4234
Urology, 522-4301

We have over 200 specialists who can immediately turn to one another for assistance. But we're not here just for each other. Straub would like to be a valuable resource to other physicians in Hawaii as well. Many of our specialists regularly visit the neighbor islands and are available for consultations.

We respect the relationship you have with your patient, which means we work closely with you to meet your needs and then return your patient to your care as soon as possible.

If you'd like consultation on a case, just call us at one of the numbers listed on the left. Or, if you'd like to talk to us about providing your services at our hospital or at one of our 11 clinics, please call Dr. John Berthiaume, Vice President, Professional Affairs, at 522-3973.

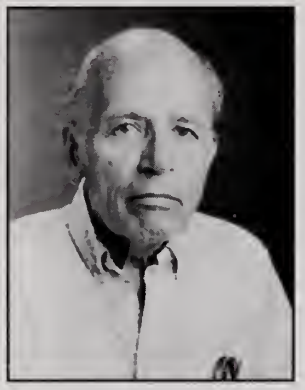
Give us a call today. After all, we're here to help *you* help your patients.

When it really matters, people turn to
Straub

A Doctor's Advice on Choosing How to Die

by A.A. Smyser

Reprinted from the Star-Bulletin 3/12/95, Hawaii's World



Bud Smyser

Editor's Note.—September 1996
We continue the A.A. "Bud": Smyser "Hawaii's World" Honolulu Star-Bulletin columns. Dr Max Botticelli's presentation is reviewed in this March 12, 1996 issue of the Star-Bulletin, and is reproduced with permission. The Hemlock Hawaii Society can be contacted at (808) 735-7146.

What would you think of a physician who told you—that particularly in our later years, say 65 or over—you should:

- Consider how you want your life extended at all costs your last year likely will be filled with expensive and futile treatments.
- Be aware of the well-intended preachments of the American Cancer Society and the American Heart Association implying life is worth extending at all costs. Know that a "successful outcome" such as a reduction in tumor size does not necessarily promise a longer and better life.
- Choose treatments for whether they will make your life better. Learn the odds on a successful outcome. Ask your physician to describe the natural history or progression of your disease. Only then choose between treatment and simply being kept comfortable.
- Be aware that sanctity-of-life preachments may lead to excessive, futile, expensive end-of-life treatments.
- Consider a heart attack as a preferred way to die, as he does. If so, and if your life expectancy is not long, stop worrying about your high cholesterol. It is a main cause of heart attacks. He says high blood pressure on the other hand is a main cause of strokes, which are another matter.
- Be wary of aggressive physicians who for varying reasons, some crassly financial, will push you toward treatments at all costs. Unfortunately they don't come with labels on their foreheads, he says, but a trusted personal physician who understands your wishes can guide you away from their unnecessary treatments.
- Refrain from calling—or letting your friends call—911 if you want to be allowed to die. If anyone, call your personal physician.
- Be aware that simply having a living will is not enough. Through a power of attorney you should designate people to help aggressively enforce it for you.

Be sure your wishes are thoroughly understood by your agents, family and personal physician, in part to relieve them of any feeling of guilt from promoting your demise.

What would I do with such a physician? I'd love him, heed him, and spread the word about him as I am doing here.

He is Dr Max Botticelli, 64, recently retired as chairman of the John A. Burns School of Medicine at the University of Hawaii. He is one of a handful of socially conscious physicians in Hawaii who are working to make dying a peaceful, even welcome, event. Next to birth it is the most significant religious experience in life, he says.

He urges us to accept death's inevitability and plan for its as we plan for other events in our lives.

It was to a joint meeting of Hemlock Hawaii and the Memorial Society of Hawaii. Some 300 people attended, most of them gray-haired.

He told them he has little faith in working for legislation to improve things. Rather, he would work ever harder to change public opinion. The Hemlock Society and Memorial Society, he said, should be as aggressive in promoting their message as the cancer and heart associations are in promoting theirs.

Men's March Against Violence

Thursday, October 10

Educating for Non-Violence

This October 10, 1996, Honolulu will celebrate its *2nd Annual Men's March Against Violence.* Once again hundreds of men will march and rally in downtown Honolulu led by civic and educational leaders. We are expecting more than 500 men marching and 300 women lining the route and joining them at the rally. This year's theme is Educating for Non-Violence. It is time for men to stand up and take a stand against violence in our homes, schools and communities. It is time for each of us to break the silence and begin educating our children, our brothers and sisters, our fellow workers, and our leaders about non-violence. Join us!

While this is a march for men who wish to make a significant and courageous statement against violence, women are encouraged to support the marchers on the route, and attend the rally. For women who feel strongly about participating on a more profound level, please contact the YWCA Honolulu at 538-7061 and ask for information about the entire week which is filled with various events to bring Domestic Violence to an end. For regular updates contact Joe Bloom at 536-1794, or by fax: 599-8761. Leave your name, organization and fax number.

Keeping the Care in Managed Care

Managed Care is changing the face of medicine in many different ways. Through new ideas and innovative approaches, health care providers have a unique opportunity to shape the future of medical care in this rapidly changing environment.

For 10 years, the HMSA Foundation has helped providers face the challenges of an evolving health care marketplace through relevant educational programs. This year, we're proud to join the University of California, San Diego, in presenting "Shaping Managed Care," an enlightening two-day conference featuring managed care vanguards Dr. Robert Brook, Russell Coile and others.

Ilikai Hotel Nikko Waikiki
8:30 a.m. to 3:30 p.m.
Friday and Saturday, Sept. 27 and 28, 1996

Attendees will learn:

- Best practices from leaders in health care
- Cutting edge management practices that work
- Changing practice roles in managed care
- Local initiatives in medical management

And much more.



We look forward to seeing you at this special event. To register, call 1(800) 711-5030. For more information about the HMSA Foundation, please call 948-5613.

"Shaping Managed Care" is co-sponsored by HMSA, Kaiser Permanente, Kapiolani Health, Kuakini Health System, Queen's Health Systems, St. Francis Health Care Systems and Straub Clinic and Hospital.

News and Notes Henry N. Yokoyama MD

Life in These Parts

A grateful Young K. Paik, director of Hawaii Bone Marrow Donor Registry wrote: "On behalf of the Registry, the St. Francis Medical Center and all patients, present and future, in need of a bone marrow donor, I would like to express our profound gratitude to the volunteers, the media and the 30,574 people of Hawaii who registered with us during the past month."

Kaiser Medical Center launched a Diabetic Limb Treatment Program in January 1995 to prevent limb amputations among its 8,000 identified diabetics. The program was staffed by vascular surgeon Peter Schneider, internist Mitchell Motooka, orthopod Mark Santi and podiatrist Earl Wong. Comparison of 1993 and 1995 results were remarkable: Amputations dropped 56% (52 to 23 cases); hospital admissions dropped 16% (159 to 134 admissions) and hospital days dropped 65% (2,843 days to 995 days).

Miscellany

A car skidded on wet pavement and struck a light pole. Several bystanders ran over to help. A woman was first to reach the victim, but a man rushed in. He pushed her back and barked, "Step aside, lady. I've had a course in first aid."

The woman watched his procedures for a few minutes and them tapped him on the shoulder, "Pardon me, but when you get to the part about calling a doctor," she said, "I'm right here."

From Playboy's Party Jokes July 1996

A young physician would drop into a bar after office hours to order a daiquiri cocktail with nutmeg sprinkled over it. One evening the bartender discovered he was out of nutmeg, but he had a bowl of mixed nuts on the back bar. He grated a hickory nut over the daiquiri and served it to the doctor.

After a sip, the doctor asked, "What's this?"

"A hickory daiquiri, doc," was the reply.

From Laughter—The Best Medicine

The 30-year-old grand multip had just given birth in the northern Ontario hospital. She was being gently persuaded by my colleague to consider sterilization. "You've had ten beautiful babies," he reasoned. "Don't you think you should have your tubes tied?"

Her response was quick and to the point. "It's a bit permanent, isn't it?"

Stitches Oct. 1994, T.R. Aitken, Stratford Ont.

Discrimination?

I had finished my OB-Gyn training and had just opened my office. An elderly gentleman walked into my office and requested an appointment to see me. My secretary politely declined the request saying I was a "woman's doctor." After further attempts on his part, she finally said, "I'm sorry, but the doctor only sees women."

Indignant, he replied, "Is that legal?"

Stitches, June 1996
Michael Green, Cogourg, Ont.

Appointed

John Edwards Jr., QMC VP for physician relations was appointed president of Diagnostic Laboratory Service Inc. (owned 90% by QMC and 10% by KMC)

Brian Martin was elected president of Mental Health Association in Hawaii. Neal Winn was promoted to VP of Medical Affairs, Kapiolani Health, holding company for Kapiolani Medical Center for Women & Children. John Morris was named president & chief executive officer of Queen's Managed Care Plans. Marek Mirski, former assistant professor in Neurology at John Hopkins was appointed director of QMC Neuroscience Institute.

Sportsmen

Veteran kendoist, Noboru Akagi (7th dan) will head a Hawaii physician delegation to participate in the All Japan Physician Kendo Tournament in Okinawa, September 21 to 23. The Hawaii team includes Steve Wilson (3rd dan), Michael Kurosawa (2nd dan) Warren Ishida (1st dan) and Junichi Tokeshi (1st dan).

Girth Control

In my early years of practice, amphetamines were widely used as appetite suppressants. A 40-year-old man who'd come for a different reason turned as he was leaving the consulting room and asked, "Say, Doc, could you give me some of them appetite pills?"

I was desperately busy, so I simply wrote a prescription for 30 once daily amphetamines and admonished him to be sure to return in one month so we could follow his weight loss.

He dutifully returned. Noting that his weight was down only half a pound, I said, "I guess those pills didn't work well for you."

He replied, "No, I guess not, Doc. But you know, it's a funny thing—since I started them pills, I just had to force myself to eat as much as I used to."

Condensed from Stitches
J.E. Golumbia, Saskatoon

Researchers Report

Researchers reported in the Archives of Internal Medicine that Dutchmen who drank black tea and ate apples had a 73% lower risk of stroke. A 15 year study of 552 Dutchmen showed that high flavanoid intake had a antiplatelet aggregation effect as well as a antioxidant effect.

A Harvard Medical School researcher Ichiro Kawachi reported in the Archives that women who drank coffee were less prone to commit suicide. The study included 86,626 female nurses from 1980 to 1990. There were 11 suicides among those who drank 2 to 3 cups of coffee and 21 among those who almost never drank coffee. The report is consistent with a 1993 Kaiser report of 128,934 men and women who showed a lower suicide risk among those drinking more coffee.

Researchers at University of Michigan Medical School led by a Sewon Kang reported in the Archives of Dermatology that Retin-A rubbed daily for six months on stretch marks from pregnancy or obesity shrank the stretch marks 14% lengthwise and 8% in width in 10 patients (ages 17 to 32).

A study published in the *JAMA* and conducted by Medical College of Wisconsin researchers on 13 young, fit volunteers revealed that the treadmill burned 700 calories an hour, the stair machine 627 calories, the rower 606 calories, the cross-country ski machine 595 calories, the Airdyne 509 calories and a regular stationary bike 498 calories.

Indicator

Recently, when doing a preop assessment of a patient scheduled for mastectomy, I noticed rather prominent and somewhat pulsating neck veins. The patient hadn't noticed them, so I asked her husband who was in the room, if he had noticed them. He blushed and said rather hesistantly, that, yes, he had on many occasions while in bed. He used them as an indicator as to how he was performing.

Eric Paetkase, Ontario

Potpourri

Signs you need a new doctor

- You can read his handwriting
- His malpractice attorney named him Client of the Year"
- He asks you to turn your head and cough during an eye exam
- During surgery he keeps repeating, "The thigh bone's connected to the knee bone."

Laughter, The Best Medicine
Readers Digest August 1996

Conference Notes

Visiting Professor Lawrence Tierney

Iatrogenic Disease

Iatrogenic: "Induced by a physician"

Hippocrates said: "Do no harm. Iatrogenic illness are as old as the practice of medicine" Moses called them "Diseases of medical progress."

Clinical Expressions of Iatrogenic Illness

- Direct bodily harm related to diagnosis, invasive therapeutics, or supportive procedures, surgery, newer medical therapies
- Organ specific or systemic insult from drug therapy (dose related, idiosyncratic, interactive, expected effect).
- New disease as an indirect consequence of previous therapy
- Expression of natural history of diseases
- Insult unrelated to process of care giving (eg. falling out of bed)

Etiologies of Iatrogenic Illness

- Bad luck ie. Murphy's Law
- Problems with history, esp labeling
- Ill conceived or eccentric use of diagnostic tests
- Gaps in diagnostic synthesis

- Therapeutic misadventure; remember surgery has self recognized, 100% incidence of iatrogenic injury.
- Assumption of innocuous nature of care process
- Novel biomedical events
- Sociologic phenomena

Several Causes of Iatorgeny

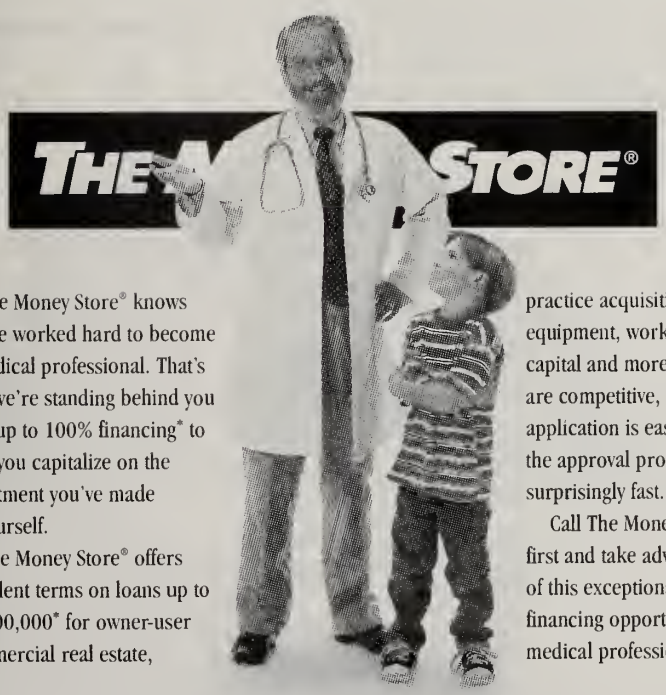
- Stringent requirements of training with resultant lack of experience
- Managed care
- Diffusion of responsibility
- Stress and fatigue
- Archaic society favoring action over observation for coin toss situations
- Revered system resulting in high esteem tendered to journal jockeys..ER "rocks"
- Medicine as apprenticeship..."See one, do one, teach one" technique as an end

What Can we do?

- More scrupulous attention to what we do
- Be more attentive to rewards system eg. fundamentals and deemphasize technical procedures
- Guidelines: Any procedure which can be taught within 72 hrs. Be skeptical about new procedures eg. streptokinase, tPA etc.
- Recognize that we make mistakes eg. isoniazide hepatitis

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The Hawaii Medical Association Community Research Bureau, a 501 (c) (3) organization, has been established to support educational and scientific projects such as the Hawaii Medical Journal. All contributions are tax deductible.

If you would like to support the Hawaii Medical Journal, please send contributions to the Hawaii Medical Association, 1360 S. Beretania Street, Second Floor, Honolulu, Hawaii 96814. Please make check payable to the HMA Community Research Bureau/HMJ. Thank you for your continued support.

We are always looking for interesting scientific articles. To submit a manuscript, please call us for manuscript guidelines.

We also are starting a new Business card Directory page in the back of the HMJ with the classified ads. You now can submit your business card to advertise in the Journal each month. Each card is $100 a month or $1100 a year. For inquiries and/or business card submissions, please contact the Communications Secretary at (808) 536-7702.

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Kauai
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Kahului, Maui 96732
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 - Information & Referral
- **Abuse Shelters for Victims & their Children**
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 Hilo 959-8864
- **Victim Support Groups**
 Developing Options to Violence
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 Maui 877-6888
 Leeward Outreach Program 681-5903
- **Batterer's Groups**
 Developing Options to Violence
 Oahu 532-5100
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- **Anger Management (Men and Women)**
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 Oahu 532-5100
 Maui 877-6888
- **Transitional Housing 532-5100**

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Nonmembers.—Please call 536-7702 for a nonmember form. Rates are $1.50 a word with a minimum of 20 words or $30. Not commissionable. Payment must accompany written order.

Services Available

The Pacific Center for Dermatology and Phototherapy is now receiving referrals for dermatology consultations and/or phototherapy. Lois Y. Matsuoka, MD., FAAD, FACP, (former faculty mem., Jefferson Med. College.) Ala Moana bldg., Suite 911, 1441 Kapiolani Blvd., Honolulu, HI 96814. (808) 941-5506.

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Kauai

Domestic Violence Services

Y.W.C.A. of Kauai
Domestic Violence Services
3094 Elua Street
(808) 245-5959
Lihue, Hawaii 96766
Fax 245-5961

Family Violence Shelter

- 24-hour Crisis line
- Counseling
- TRO
- Referral to other advocates
- Shelter
- Children Support group
- Court Advocacy
- Public education

Alternatives to Violence (ATV)

- Domestic Violence offenders
 Curriculum uses the psychoeducational program of Duluth, MN.
- Other Violence Offenders
 Court, Adult Probation or Paroling Authority referral as well as voluntary.
 Curriculum includes anger management, parenting skills, communication and relationship skills along with the domestic violence curriculum.

Sexual Assault Treatment Program (SATP)

- 24 hour Crisis line
- Counseling
- Crisis Intervention
- Public Education

Sexual AbuseTreatment Services (SATS)

- Counseling for families where incest has ocurred
 Group therapy, individual, conjoint and family therapy offered.
- Offender relapse prevention treatment

A happy ending is our goal.



Everyone loves a happy ending. However, sometimes life presents us with challenges that require the assistance of professionals.

Kapi'olani Health's community outreach programs such as the **Hawaii Family Stress Center** (947-5700), **Sex Abuse Treatment Center** (524-7273), and **Kapi'olani Child Protection Center** (944-9940), are committed to helping people strive for healthy beginnings — through intervention, counseling, education and prevention. These programs have assisted thousands of people in Hawaii.

KAPI'OLANI HEALTH

AlohaCare

Aloha is the Difference

Quick, effective tool helps PCPs diagnose depression, anxiety

AlohaCare has launched a Hawaii-based pilot program to identify mental disorders quickly and easily in primary care offices. The program employs a simple diagnostic tool called PRIME MD.

Rio Banner, MD, medical director of AlohaCare, said three groups--Kalihi-Palama Health Center, the Ohana Physicians Group and Mililani Family Practice--will take part in the evaluation. Other primary care physicans will be added if the pilot proves successful.

The tool has two main components, a set of questions the patient answers and a Clinician Evaluation Guide which the physician uses to ask follow up questions.

Streamlined assessment

Through these uncomplicated pieces, a primary care physician can assess a patient for

- depression
- anxiety
- alcoholism
- eating disorders
- somatoform disorders

PRIME MD was developed with the practicing physician in mind. The time requirements are minimal--it takes the physician only a few moments to go through the patient interview form.

"The payoff for the patient is an earlier diagnosis and treatment. The payoff for the physician and for

NEWS
We thought would interest You

AlohaCare is a healthier patient-client population at a lower cost," said John McComas, executive director of AlohaCare.

AlohaCare provides health care coverage statewide, principally to clients of the state's Med-Quest program.

Reported in JAMA

Patients with undiagnosed mental disorders, even threshold or mild ones, "have significantly impaired functions and greater health care utilization," according to an article in the Journal of the American Medical Association (JAMA), which reported on the PRIME MD program. It's one of those things that sounds too good to be true. Yet numerous studies have scrutinized the program and the results point in the same direction.

Identify those disorders, get them treated, and health care use goes down.

N. Lee-Smith, MD, an internist who's head of a stress medicine clinic and an associate professor of medicine at the University of Utah School of Medicine, told AlohaCare providers that the amount of care required in outpatient and inpatient facilities drops substantially--inpatient utilization decreased by 73 percent in one study, he said.

The researchers who reported in the JAMA article said to their knowledge, PRIME MD is the first psychiatric diagnostic interview program developed for primary care physicians.

AlohaCare managers reviewed the literature and evaluated the protocol. Working with FPM Behavioral Health, which handles behavioral health services for AlohaCare, Banner set up the criteria for the pilot.

The JAMA article reported that "more patients with mental disorders are cared for in the primary care sector than in the mental health sector." Yet, the article continued, primary care physicians often fail to diagnosis mental disorders. The PRIME MD protocol was developed to help the physician recognize the disorder.

The JAMA article cited is: "Utility of a New Procedure for Diagnosing Mental Disorders in Primary Care," Spitzer et. al, December 14, 1994, Vol 272, No 22, P 1749+

Physicians interested in more information on AlohaCare's plans should contact Dr. Banner at 973-1650.



Hawai'i Medical Association 140th Annual Meeting

Primary Care Update

October 17-20, 1996

Kauai Marriott Resort & Beach Club
Kalapaki Beach,
Lihue, Hawaii

A scientific program sponsored by:
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Hawaiian symbol representing life.

The Weathervane

Nothing ever works out but sometimes something else does.

For years walk-in patients have had "eye exams" at department stores, e.g. Sears. Now two Illinois hospitals have opened a breast cancer screening center in a Skokie Nordstrom department store which takes both walk-ins and appointment patients. If there is a wait, the lady is given a beeper so that she can shop around until called. The X-rays are taken by mammography techs, interpreted by hospital radiologists, and the results forwarded to the patient's personal physician.

He is like the rooster who thinks the sun rises to hear him crow.

Senator Edward Kennedy of Massachusetts was effectively blocking the health reform bill before Congress, but he has now given in. His primary opposition was that he did not want to allow medical savings accounts. The reason is not that he feared they will fail, but rather that he is certain they will work, both to control costs and to allow choice. It is a fact that the success of MSAs will surely reduce the possibility of an eventual federal takeover of the entire health care system. Since that takeover has always been Teddy's goal, he placed his ever-enlarging bulk in the way. What a guy; he works so hard to protect the poor in America, to insure that they will always be there.

I don't suffer from insanity; I enjoy every minute of it.

If you still labor under the delusion that we live in a sane world, not that in Los Angeles, surgeons at Cosmetic Surgery International perform 30 to 45 penile enlargements each week, and are booked a month ahead. Some surgeons, plagued by managed care and reduced incomes, see penile enlargement as a great money maker. Free from regulation, the operation to lengthen and/or widen the penis is offered with ads and brochures to appeal to men with a poor self image, or to use the old phrase, an inferiority complex. The American Urological Association and the American Society for Aesthetic Plastic Surgery claim that the "surgery has not been shown to be safe or efficacious," but it is now big business (careful, not too big). Some recent testimonials, "This is absolutely the best thing that ever happened to me," and "now when I go into business meetings, I'm thinking, 'if you guys had just half of what I have,'" and "I can't believe I waited so long." However, the malpractice attorneys are enraptured, as the complaints pile up; infection, scarring, impotence, and incontinence. I wonder what you would call an attorney who specializes in this area of litigation?

Habit is habit and not to be flung out the window by any (wo)man.

Poor Hillary! Not only is she accused of wading around in Whitewater (but she forgot that), and trashing the White House travel office staff (shoe doesn't recall), but her recent pre-election boo, "It Takes a Village and Other Lessons Children Teach us," has come under criticism. It seems that her ghost writer, Barbara Feinman, received $120,000 paid by the publisher, Simon and Schuster, and critics say that amounts to a gift to the first family. Moreover, Ms. Feinman received no credit or acknowledgment in the book, and had to sign a confidentiality agreement. It remains a fact: dress her up, fix her hair, anoint her the first lady, and have her converse with Eleanor Roosevelt, but a lawyer is always a lawyer.

It is always with the best intentions that the worst work is done.

An unprecedented criminal action in Florida was brought with the arrest of a medical director of an HMO who was not licensed to practice medicine in that state. Although he is board certified in family practice and holds a medical license in Wisconsin and Indiana, the doctor is being prosecuted for practicing without a license in Florida. He apparently crossed the line beyond administration by making recommendations and decisions for care. The attorney for the Florida Medical Association stated that making recommendations for care is interfering in the doctor-patient relationship, and that is practicing medicine. If HMO medical directors are not licensed, there is no way to regulate them, and they are accountable to no one but the stockholders, according to a FMA spokesman. Ah, yes, managed care—good for investors, not so good for doctors or patients.

Gatekeepers provide excellent care, if you are not too sick.

An interesting study involving 221,000 patients at Duke University Medical Center suggests that patients arriving in the emergency room with chest pains, and diagnosed as having myocardial infarctions, were at greater risk in gatekeeper medical plans. Of those patients who were immediately turned over to cardiologists, 31% died within a year, while 38% of those cared for by internists died, and general physicians lost 40.3% of similar patients within one year.

I live every day as if it were my last, which is why I sleep on a bedpan with a tube up my nose. (Bill Maher)

While there appears to be strong public support for physician-assisted suicide, a recent study in the Lancet found that cancer patients wanted relief from pain, but did not seek suicide. Moreover, when queried about assisted suicide for reasons other than pain, support plummeted. Researchers found that depressed cancer patients were those most likely to request the service, irrespective of pain. The study appears to show a conflict, and rushing to make physician assisted suicide a constitutional right, may not serve those for whom the issue is supposedly directed. Additionally, those patients with terminal cancer were less trusting of those doctors who discussed suicide as an alternative.

What the government gives, it must first take away.

In 1975, the Pennsylvania legislature passed a law providing for a professional liability catastrophe loss fund, and in 1995 the state run program had record payments of $280 million. This fund is supported entirely by surcharges on a "pay as you go" basis; in other words, a bottomless treasure for malpractice attorneys. About 250 health care providers have refused to pay their portion of the $107 million surcharge, saying this process is crushing them financially. Those physicians who chose not to comply are facing disciplinary action, and the licensing board is required by law to suspend or revoke their licenses. Lucky you live Hawaii!

Aloha and keep the faith—rts. ■



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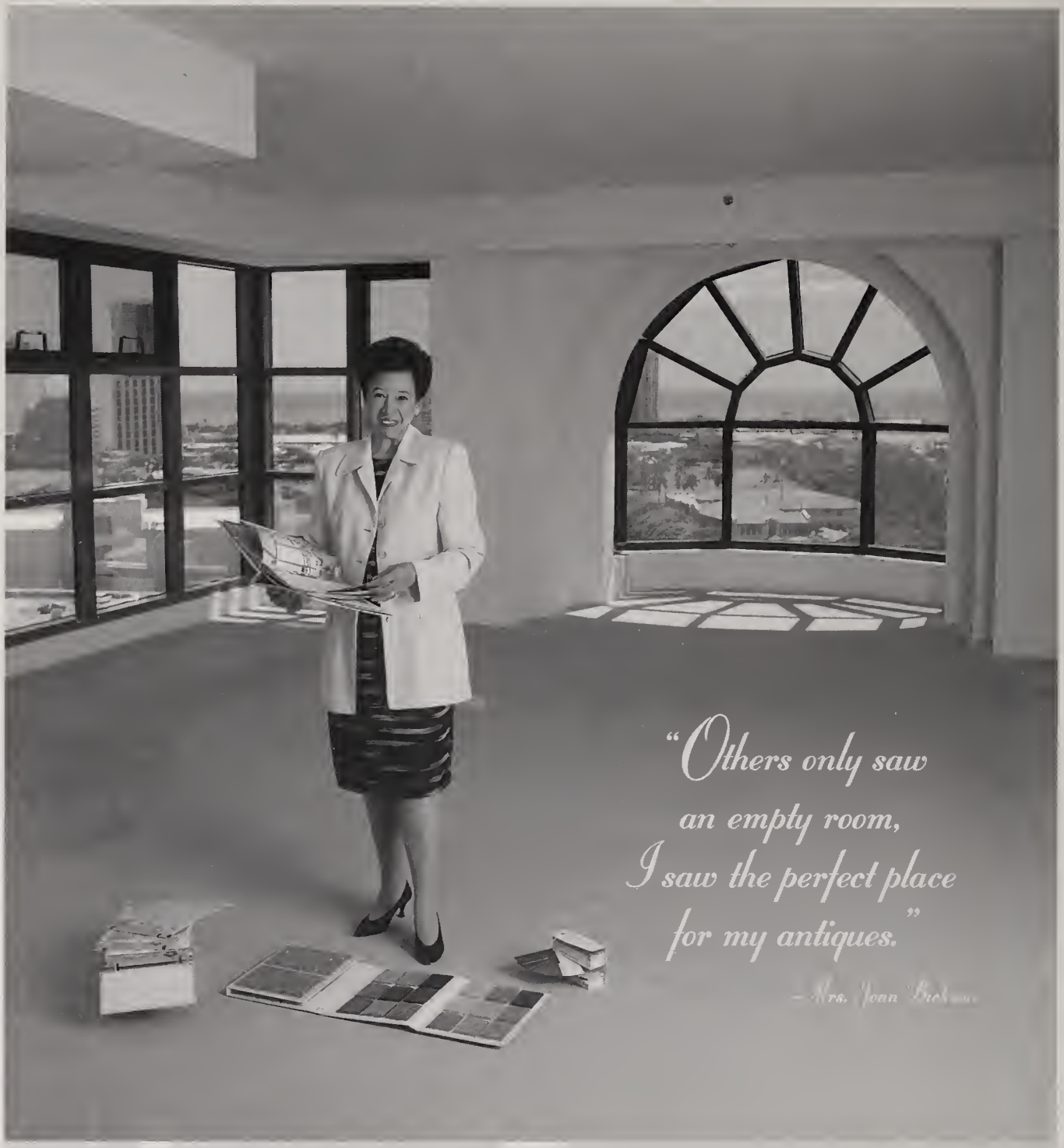
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HAWAII MEDICAL JOURNAL

October 1996 Volume 55, No. 10 ISSN: 0017-8594



HAWAII MEDICAL ASSOCIATION · 1856 ·



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Geri Wong, Mary Worrall Associates, Inc., 735-2411.

THE QUEEN VICTORIA

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Ka Loko

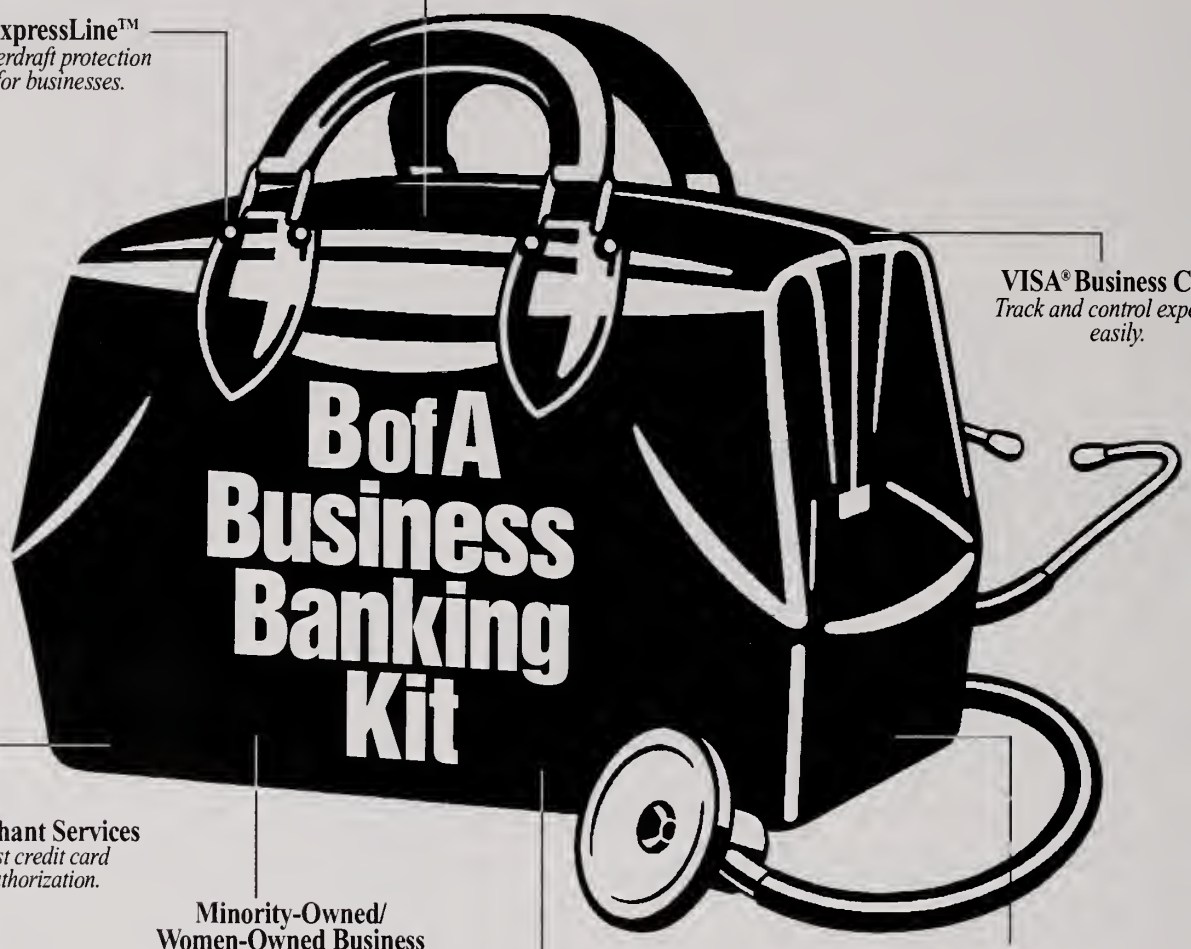
Hawaiians of old were unsurpassed in pond building and aquaculture. *Taro* and certain types of fish were sometimes raised in the same pond.

A Call to Physician Authors

We are always looking for interesting scientific articles and we would like to hear from more of you. The Hawaii Medical Journal is a peer reviewed publication and covers a wide variety of topics. To submit a manuscript please call us for manuscript guidelines. Fax or call for your requests to: Hawaii Medical Journal, 1360 S. Beretania Street, Honolulu, Hawaii 96814, Phone (808) 536-7702 or Fax us at (808) 528-2376.

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EQUAL HOUSING LENDER

Editorial

Norman Goldstein MD

Report to the 140th HMA Annual Meeting

October 17-10, Kauai, Hawaii

The Hawaii Medical Journal is alive and doing well! Despite the "thin" issues in 1995 and 1996, because of budgetary restraints, we have had some very special issues.

In 1995, they included April—**Medicine, Law and Bioethics,** May—**Fred Reppun Memorial issue**, June—**Fred Gilbert Festschrift**, July—**Military Medicine in Hawaii**, November—**History of Medicine in Hawaii**. In 1996, the March Special issue was dedicated to **Vog** and the September issue to **Domestic Violence**. A special issue in December will deal with **Death with Dignity.**

Thanks to the Guest Editors for these issues: S.Y. Tan, MD; Bob Nordyke, MD; Ben Berg, MD; John Breinich, MS and Al Morris, MD: and the 1996 Guest Editor: Florence Chinn MD.

The reference staff of the Hawaii Medical Library has graciously continued to prepare our invaluable Index to the Journal.

Our regular columns by Russell Stodd MD and Henry Yokoyama MD continue to be very popular, according to the Readers Survey done in October 1995. Because of our limited funds, the manuscript pages as well as some of our other regular columns had to be kept to a minimum.

We published 80 manuscripts in 1995 and 36 from January to October 1996. Many thanks to our 157 Peer Review Panel members which were listed in the January 1996 issue (page 5), our hard-working staff, Carol, Becky and Noreen. Jan Estioko worked with us for eight years, but is no longer with the Journal. Dietrich Varez' art continues to give us a very "Hawaiian" feeling to our covers, and Pacific Printing and Publishing continues their excellent services delivering the Journal on time, every time.

Our major problem is financial. For many reasons, we are not getting enough advertising income; hence, "thin issues." **Members can help by suggesting drug company representatives, car sales people, bankers, etc. who should contact the HMA office and take out ads.** A physician's business card, referral page is also planned. The Journal is very highly respected by the media in Hawaii. We also became a member of the Hawaii Publishers Association in 1996.

The Journal must continue publishing, not just for the members/readers, but for the continued prestige of the Hawaii Medical Association.

Euthanasia Conference—Denver

The Hemlock Society will sponsor its Ninth Annual Euthanasia Conference on November 8 and 9,1996 in Denver, the new home of the Society. (A report of the conference will appear in the December issue of the Journal—The Special issue on Death with Dignity.)

Hemlock Hawaii hopes to have established members as well as new members attend. For further information, contact:

Folly Hofer, RN, MPH, President, Hemlock Hawaii
1434 Punahou Street, Suite 504, Honolulu. Hawaii 96822-4721
Phone (808) 946-4452, Fax (808) 949-4965 (Folly #501)

The Journal welcomes Letters to the Editor on this subject as well as any of our articles.

HMA President's Message

Carl W. Lehman MD

EUREKA! The HMA now offers to its members, the financial management expertise to manage retirement plans by a corporation (SEI), who in the past accepted only accounts of 250 million dollars or larger. Through the HMA, members may use SEI to manage their retirement plans. There is still a $150,000 minimum requirement, but that is achievable by most doctors after contributions for a number of years. The cost of management fees through this large organization is less than half of what most of you are paying to brokers at this time, to manage your retirement fund investments. The savings from these lower fees will pay for your HMA, the AMA dues, with personal savings to the HMA member. This action by the HMA resulted from Dr "Len" Howard's efforts in finding this opportunity for the HMA. For more detailed information on this project, please read Dr Howard's message in the forthcoming Hawaii Medical Newsletter.

The HMA held a 1-1/2 day Strategic Planning session in August 1996, facilitated by the AMA's vice-president Strategic Planner, Mr Bruce Balfe. We derived at a consensus to focus on assisting members with financial and management problems in their practices.

In addition to the above project, we initiated two other activities this year which may greatly benefit members.

1. Central verification of credentialing is now available through the HMA to decrease the amount of forms required of you to complete for each hospital and managed care group that participates with us.
2. Our attorney, Lisa Tong, will critique contracts submitted by third party insurance companies, manage care organizations, hospitals, etc. and provide legal information (not legal advice) to our members.

We believe that the above tangible activities provided by the HMA more than offset the members annual dues. I encourage you to take advantage of these opportunities. I also ask that you support the AMA which has been most successful in influencing the language and passage of many bills through the Congress this past year. The HMA has been politically active in our state legislative activities this past year and plans to maintain our active presence at next year's Legislature through our Analyst (better than a lobbyist) who represents us at all times during the Legislative session.

As my term of Presidency for the HMA is nearing completion, I wish to express my deep appreciation to the membership for the honor and privilege you have given to me to preside over this most prestigious organization.

This my last message has been the most difficult for me to write, not because of lack of topics, but because of the multitude of activities and subjects that we address in organized medicine.

Mahalo and Aloha—

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Medical School Hotline

The Role of the Medical Technologist in Medicine

Patricia Taylor MS, MT (ASCP) CLS
Associate Professor & Chairman
Medical Technology Division
John A. Burns School of Medicine

The role of the medical technologist in medicine is always changing and that is even more true in today's world. Indeed downsizing, right sizing, mergers, re-engineering, restructuring, and reorganization are familiar terms to these health professionals. Added to the many changes are the numerous regulations such as the Good Manufacturing Practices required in Blood Banking and the Clinical Laboratory Improvement Amendments of 1988. Finally, trends like point-of-care testing and managed care create a scope and a rate of change that has great significance.

Even medical technologists actively involved in providing the fundamental laboratory services have new dimensions to their positions whether it be the technology itself, supervising others or dealing with billing codes. These professionals have long been responsible for quality assurance in the laboratory which involves accuracy in specimen identification, viable reagents, proper methodology, functioning instrumentation and responsible distribution of results. Generally they work behind the scenes.

Some of the unique opportunities emerging for medical technologists are positions on institution-wide committees to develop policies and problem solve, trainers on specific hospital wards or for entire facilities to oversee the point-of-care testing and as consultants in establishing all the systems and documentation needed for testing in physicians offices. Some have traded a microscope for a telephone and serve as client service representatives on the front line to facilitate the numerous issues that surface in the clinical laboratories.

Medical Technology includes five major disciplines: hematology, clinical chemistry, microbiology, immunology and immunohematology or blood banking. The medical technologist is educated in all of these as a generalist but it has been common in larger facilities to work as a specialist. Recent trends call for a return to the generalist role and many are refining old skills. New roles better utilize the many skills and competencies of today's medical technologists. In fact, medical technologists are being recognized by a new name which is clinical laboratory scientist. This title more appropriately reflects their background and helps to avoid confusion with the term medical technology which often is used in describing technological advances in medicine like specialized care units or imaging devices.

The education of clinical laboratory scientists in Hawaii has quite a history. This year marks the 50th anniversary of awarding the baccalaureate of science degree in medical technology at UHM. While the initial curriculum involved a senior-year rotation in a clinical laboratory to learn all the skills needed for the profession, modifications in the curriculum have added professional courses on campus starting in the freshman year. Early courses acquaint the students with the profession before they apply for acceptance into the junior year. Additional courses in the profession during the junior and senior years enable students to acquire professional level knowledge, skills and attitudes in the academic setting. A clerkship of six-weeks is designed between the junior and senior year which gives students an opportunity to gain personal experience in a clinical laboratory. A problem-based learning component is offered during this clerkship and students are linked by distance technology as needed. This summer a PBL section had students from Arkansas and Saipan linked with their classmates on Kauai while the tutor was in Honolulu. All students return to campus for their senior year. After earning the degree, they spend a final six-months clinical training rotation in a laboratory refining skills gained in the classroom and on site. Distance learning technology links students on Oahu and Hawaii. The student then takes a national certification examination which is required for employment and seeks state licensure in those states where such exists. The baccalaureate degree prepares students to be marketable professionals.

The job market is changing dramatically. About two years ago in Hawaii and nationally there was a shortage of clinical laboratory scientists. Last year jobs were hard to find. However, in the last two months most to all of the graduates have been hired here and in selected areas of the mainland.

The Division of Medical Technology is part of the John A. Burns School of Medicine. Faculty in the Division serve as tutors and resource people among other roles in the MD-PBL program. At times learning activities bring the students in medicine and medical technology together which facilitates their teamwork in the marketplace. The Division utilizes distance technology linking faculty in multiple sites on four islands. Clinical faculty in the many facilities together with faculty on campus provide an invaluable partnership in planning and delivering this curriculum.

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Long Term Low Dose Interferon Alpha-2b in the Treatment of Chronic Hepatitis B in Multi-Ethnic Patients in Hawaii

Nathaniel Ching MD *, James Lumeng MD **, Ronald Pang MD **, Glenn Pang MD**, Fung Wa Or BA***, Natascha Ching BA, and Clara Ching PhD ***

The antiviral and immunomodulatory effects of interferon were assessed in the treatment of chronic hepatitis B in multi-ethnic patients to prevent viral replication and chronic liver damage. Five million units of recombinant interferon alpha-2b were administered three times a week for 48 weeks to a group of 18 chronic active hepatitis B patients. A complete response was defined as seroconversion to anti-HBe and/or loss of HBe antigen. Seroconversion to anti-HBe in 5 of 12 (42%) chronic active hepatitis B patients occurred after 48 weeks of therapy. HBV-DNA decreased to undetectable levels in 8 of 12 (67%) patients. This chronic low-dose interferon administration regimen demonstrated responses comparable to other studies.

Introduction

Chronic hepatitis B is a major public health problem in Hawaii because of the large immigrant population from Asia and the Pacific Basin. Exposure to hepatitis B virus (HBV) often results in chronic hepatitis that can significantly increase the risk of developing cirrhosis and hepatocellular carcinoma.[1] Approximately 30,000 to 40,000 in Hawaii have been infected with hepatitis B virus (HBV). The estimated carrier rate in Hawaii is 2-3%, higher than the 0.5% of the mainland United States.[2] In acute HBV infection in adults, 90% of those infected will develop a primary antibody response; 5 to 10% of patients will develop chronic inflammation.[3] More than 90% of neonates born to HBeAg-positive mothers have been reported to develop chronic HBV infection.[4,5] Interferon has been shown currently to be the most effective therapy in approximately 30 to 40% of chronic hepatitis B patients[6,7,8] because of its antiviral and immunomodulatory effects. Perillo et al[8] have reported hepatitis Be antibody (anti-HBe) seroconversion and loss of HBV DNA in patients treated with interferon with (36%) and without (37%) prednisone. Long term remission with formation of anti-hepatitis Bs antigen (anti-HBs) was observed by Korenman et al[9] in patients followed for 3 to 7 years after interferon alpha-2a therapy. This represents a hopeful therapeutic option for patients who are not able to spontaneously suppress the HBV infection immunologically.

Based on our previous experience with interferon protocols in selected cancer patients,[10] the daily administration of 5 million units interferon daily over 16 weeks as utilized by Perillo et al[8] would not be a tolerable dose for our population in Hawaii because of the constitutional symptoms of interferon. In our cancer patients, we first used a lower interferon dose, 1 million units, administered three times a week because the rest periods made this therapy more tolerable and natural killer cell function was better maintained.[10,11] The majority of our chronic hepatitis B patients were fairly asymptomatic before therapy and gainfully employed. Fatigue and weakness resulting from the medication would preclude many from continuing their occupations.

A Phase II protocol was initiated to treat chronic hepatitis B patients to determine the effect of 5 million units of recombinant interferon alpha-2b (Schering-Plough Corporation, Kenilworth, NJ) administered subcutaneously three times a week for a period of 48 weeks. The objective was to utilize the antiviral and immunomodulatory effects of interferon to prevent viral replication and the chronic liver damage with the increased risk of developing hepatocellular carcinoma. These studies indicated that this interferon dose and schedule could suppress HBV replication and result in HBeAg seroconversion and normalization of biochemical liver function activity.

Materials and Methods

Patient Population

Adult volunteers were recruited from the database of hepatitis B carriers maintained by the Hawaii Department of Health.[12] These patients were re-staged for HBV serological markers: hepatitis B e antigen (HBeAg), antibody to HBeAg (anti-HBe), hepatitis B surface antigen (HBsAg), antibody to HBsAg (anti-HBs) and serum alanine aminotransferase activity (ALT), to determine the stage of their hepatitis B infection. From this database, 17 of 95 (18%)

Departments of Surgery * and Medicine *** John A Burns School of Medicine at St. Francis Medical Center University of Hawaii and Department of Medicine St. Francis Medical Center ** Honolulu, Hawaii

Supported in part by a grant from the Hawaii Department of Health Hawaii Medical Association and Cancer Federation, Inc.

Address correspondence and requests for reprints to: Nathaniel Ching, M.D. Department of Surgery St. Francis Medical Center 2230 Liliha Street Honolulu, Hawaii 96817 Phone: (808) 533-2005 Fax: (808) 545-1768

patients screened had chronic active hepatitis B: HBsAg and HBeAg positive; ALT levels were 100 IU/L ± 128. Gastroenterologists also referred patients for evaluation and therapy.

Chronic active hepatitis patients, HBeAg and HBsAg positive for greater than 6 months, anti-HBe and anti-HBs negative, ALT levels >1.3 x high normal (45 IU/L), were selected for therapy.

Interferon Therapy

Eighteen chronic active hepatitis B patients were treated with recombinant interferon alpha-2b (Intron-A, Schering-Plough Corporation, Kenilworth, NJ). Three million units were adminstered subcutaneously 3 times per week for 2 weeks and, if tolerated, the dose was increased to 5 million units for a total of 48 weeks.

Patients received their injections in the Ambulatory Oncology Clinic or chose to voluntarily self-administer their medication after training by the Oncology Nursing Staff. The dose was reduced to 3 million units when platelets were <100,000 or granulocytes were <1000. All patients signed written informed consent for treatment with this interferon protocol approved by the Institutional Review Board.

Evaluation During Therapy

Patients were evaluated during therapy for hematological, biochemical and serological profiles. Blood was collected for complete blood and platelet counts; liver function tests including serum alanine and aspartate aminotransferase and gamma glutamyl transpeptidase activities (ALT, AST, GGPT) prior to therapy, after 2 weeks, monthly during therapy and 2-3 months post therapy. The serological markers for HBV, HBeAg/anti-HBe and HBsAg/anti-HBs, were evaluated at baseline, after 6 months, at the completion of therapy, and 2-3 months post therapy by the Enzyme Immunoassay (Abbott Laboratories, Abbott Park, Il). All evaluations were performed by the same Clinical and Reference Laboratories.

A complete response was defined by loss of HBeAg and/or the formation of anti-HBe or anti-HBs; non-responders showed persistence of HBeAg. A clinical response was defined as the normalization of serum ALT levels.

HBV DNA Assay

A sensitive and quantitative radiological molecular solution hybridization assay kit for HBV-DNA generously supplied by Abbott Laboratories (Abbott Park, IL) was used for evaluating viral replication and monitoring antiviral therapy.[13] Aliquots of serial serum samples from each patient stored at -70C were tested for HBV DNA at baseline, 2-3 months intervals, the end of therapy and 2-3 months following therapy. The assay utilizes a single-stranded I-labeled DNA probe complementary to HBV DNA sequences and with a minimum specific activity of 10 cpm/µg. Sensitivity of the assay was 1.5 pg HBV DNA per ml of serum or approximately 4.5 x 10E5 HBV genomes per ml serum.

Statistical Analysis

Results are expressed as arithmetic mean ± S.D. except where noted. Data was analyzed with the Sigma Stat program (Jandel Scientific, San Rafael, CA). Continuous variables were analyzed by linear regression and/or the non-parametric Kruskal-Wallis technique. The IBM 55SX and PS80 PC computers were used.

Results

Study Population

The average age of the chronic active patients was 33 ± 10 yrs; 10 of the 18 (56%) were males. Baseline liver function tests (ALT, AST and GGPT) were increased in the chronic active patients: ALT = 96 ± 74 IU/L, AST = 62 ± 39 IU/L, GGPT = 141 ± 304 IU. Immigrants from Vietnam represent the major ethnic group of patients (39%); Filipinos, 22%; Chinese, 17%. All were gainfully employed, housewives or students except for three unemployed medicaid recipients.

Toxicity

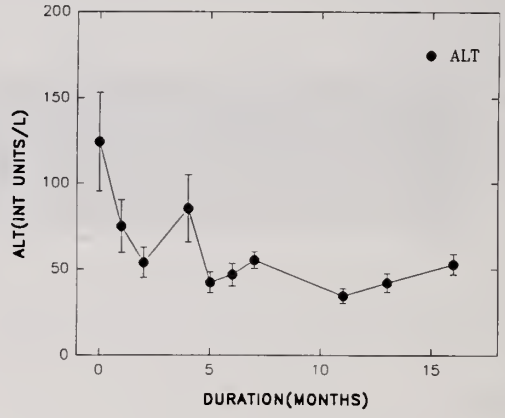
With this interferon protocol at a reduced dose of 5 million units three times a week, 6 of 18 (33%) patients ceased therapy on their own choice. Their reasons included: inability to care for family(2) or to tolerate the side effects.(2) Two gave no reason for terminating treatment.

Although we used a lower dose IFN protocol, 3 of 18 (17%) chronic active patients required dose reduction from 5 to 3 million units because of intolerable constitutional symptoms. In two patients, platelets decreased below 100K. One patient on Dilantin required a dose reduction to 1.5-2 million units because of granulocytopenia.

Biochemical Liver Function Tests

Assessment of biochemical studies for liver function revealed increased ALT levels in the chronic active hepatitis patients which returned to normal levels in those completing 48 weeks of therapy, $p < .05$ by ANOVA analysis (Figure 1). This occurred whether or not seroconversion occurred. The non-responders had flares of ALT levels after discontinuation of interferon therapy.

Fig 1.—Changes in ALT levels of chronic active hepatitis B patients on interferon therapy, X ± SD. Elevated levels at baseline decreased to normal levels in those patients completing the 48 weeks of therapy (P<.05).



Serology of HBV Markers

Serological markers for HBsAg/anti-HBs and HBeAg/anti-HBe were assessed to determine the outcomes. Loss of HBeAg and seroconversion to anti-HBe occurred in 5 of 12 (42%) patients after interferon therapy with no relation to the dose received. One patient responded after only six months of therapy; a sixth patient was HBV DNA and HBeAg negative after six months of therapy but did not form anti-HBe. In chronic active patients requiring the full 48 weeks of therapy, antibodies to HBeAg were not detected until 2-3 months post therapy. Seroconversion of HBsAg was not observed. Of the six responders, five were U.S. citizens and there was one female immigrant. Sex was equally distributed.

The remaining six patients were non-responders (HBeAg+, BHeAb-). Follow-up studies will be continued. The ethnicity of the six non-responders of the chronic active hepatitis B patients were Vietnamese (2) and Chinese (2) immigrants, and Filipino (2) born in Hawaii. The six who ceased therapy were not evaluable and were also immigrants, Vietnamese (5) and Chinese (1).

HBV-DNA

Ten of the twelve patients had elevated levels of HBV-DNA before therapy. All six responders had no detectable HBV-DNA after treatment. Two of the six non-responders did not have measurable levels of HBV-DNA after therapy although no HBV antibodies were formed.

Discussion

In this study with multi-ethnic patients, we observed the antiviral effect of interferon in 67% chronic active hepatitis B patients who showed progressive decline in HBV DNA during therapy. We achieved a 42% HBeAg seroconversion and HBeAb formation rate in patients who completed the 48-week interferon course. This Phase 11 protocol of 5 million units interferon alfa-2b administered subcutaneously three times a week for 48 weeks to patients with hepatitis B infection yielded comparable results as reported by Perillo et al[8] using 5 million units daily for 16 weeks and including pretreatment with prednisone. HBeAg seroconversion occurred in 30 to 40% of their patients with loss of HBV DNA in 40 to 50%. Similar rates of seroconversion were reported by Reichen et al[14] with either 1.5 or 5 million units interferon alpha 2b three times a week for 4 months with and without a preliminary course of prednisone therapy. HBsAg seroconversion was not observed in our studies although Korenman et al have reported that anti-HBs may appear at an average of 3 years after treatment.

We have used an interferon dose and schedule of 5 million units three times a week subcutaneously over a longer period of 48 weeks with minimal effect on blood counts. This Phase II protocol would allow greater tolerance of this medication in chronic hepatitis B patients. After approximately 9 months, the cumulative dose of interferon would be equivalent to the daily administration of 5 million units for 16 weeks as used by Perillo et al.[8] Furthermore, patients treated in an outpatient environment would be able to continue their productive work to minimize economic loss.

With this interferon dose, however, six (33%) Asian immigrant patients still discontinued treatment. The constitutional symptoms were most disturbing to these patients who were essentially asymptomatic before therapy. Some were unable to continue working. Our cancer patients have tolerated higher doses but may be more motivated to continue than the chronic hepatitis B patients.

Hawaii has a large percentage of affected Asian-Pacific patients because of the large immigrant population.[2,12] The Asian male has been observed to be the most resistant to treatment.[15] Lok et al[16] reported spontaneous seroconversion in 31 of 142 (22%) HBeAg positive Chinese patients observed up to 60 months. They predicted a 17% one year seroconversion rate. However, none of our Asian non-responders demonstrated seroconversion one year after completion of interferon therapy.

In this study, most of our non-responders were Asian male immigrants; male responders were USA or Hawaii-born. Three female responders, two Hawaii-born and a Filipino immigrant had progressive decline in HBV DNA after interferon therapy. A sustained therapeutic effect in these young females may prevent the vertical transmission of HBV to their newborn and subsequent chronic antigenemia.

We monitored the antiviral effect of interferon by serial quantitation for HBV-DNA using the solution hybridization assay. Eight of twelve (67%) chronic active hepatitis patients had undetectable levels of HBV DNA after the end of therapy. An antiviral effect of interferon is indicated with no seroconversion, as yet, in 2 non-responders. Follow-up studies are planned in these non-responders with no detectable HBV DNA.

Our diverse group of Asian patients represents a major public health problem and challenge for developing effective therapeutic interventions in Hawaii. The possibility exists that these patients may have had prolonged infection since childhood resulting in the transcription of virus to their hepatocytes and may be more resistant to interferon therapy. The elimination of chronic HBV infection is greatest if treated relatively early when viral HBV DNA exists in the non-integrated or episomal state.[17] With the high carrier rate in Hawaii, early detection and treatment as well as vaccination will be necessary for the prevention of the sequelae of chronic HBV infection.

Acknowledgments

We gratefully acknowledge the generosity and support of Schering-Plough Corporation, Kenilworth, NJ for providing recombinant interferon alpha-2b (Intron-A) for patients whose third party payors refused payment. We appreciate the donation of the HBV DNA assay kits from Abbott Laboratories, Abbott Park, IL and thank Jeff Werneke, PhD and staff for their invaluable research support, advice and technical assistance. The Nursing Staff, Oncology Unit, St. Francis Medical Center and the Hawaii-Biological Response Modifiers Research Staff are acknowledged for their dedication, cooperation and assistance during this interferon treatment protocol with our patients.

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Teen Perspectives on HIV and the Relevance of Hawaii's Health Providers

Robert J. Bidwell MD, Charles W. Mueller PhD, Eberhard Mann MD, Stephanie Mew, Candace Goo, Heather Dunbar, University of Hawaii; Gene McGrady M.D., Morehouse University; Mildred Vera PhD, University of Puerto Rico; Edward Liebow PhD, Richard H. Lovely PhD, Battelle Seattle Research Center, Seattle, Washington

Based on focus group interviews with adolescents from an urban Honolulu community, the present article describes how these adolescents view HIV, HIV-prevention and the role of health care providers in addressing HIV-related needs. Although medical providers are known to be knowledgeable experts in a variety of health care areas, other research points to an underutilization of this potential. While knowledgeable about HIV, many of the youth in this study continue to engage in risky behavior. Few perceive they have others they can meaningfully talk to about their HIV and other health concerns. Even when probed for, almost none of these teens saw health care providers as pertinent to HIV or their health beyond the traditional illness/prescription role. Suggestions for ways to get more involved in the prevention of HIV and, more generally, positive health development in teens are discussed.

Over the past decade there has been increasing evidence that Hawaii's adolescents may be at significant risk for Human Immunodeficiency Virus (HIV) infection. While there have been only 5 reported cases of AIDS among Hawaii's adolescents aged 13 to 19 years, representing less than 1 percent of total cases, 261 cases (14 percent of total) have been reported among young adults aged 20 to 29 years.[1] Because the delay period between HIV infection and a diagnosis of AIDS has a median range of eight to eleven years, many of those diagnosed with AIDS in their twenties were likely infected as teenagers. The seroprevalence rate of HIV among Hawaii's adolescents, another indicator of risk, is unknown. It has been estimated that perhaps 3000 to 5000 individuals of all ages in Hawaii may be HIV positive. Youth of color may be at special risk for HIV infection. While the majority of Hawaii's AIDS cases to date have occurred among Caucasians, the proportion of cases among Asian/Pacific Islanders has increased steadily, from 18 percent in 1989 to 25 percent in 1996.[1]

Ninety-five percent of AIDS cases in Hawaii have resulted from sexual activity and/or injection drug use. Although seroprevalence rates are uncertain, recent studies have documented the high rates of HIV-related risk behaviors among Hawaii's youths. A 1990 Hawaii Department of Health survey of Oahu 10th graders found that 43 percent were sexually active.[2] Of these only 39 percent had ever used any form of contraception (not necessarily condoms). In a 1994 Hawaii Department of Health survey of seventh through twelfth grade students on Oahu, Kauai, Maui and the Big Island, 20 percent of seventh and eighth graders and 45 percent of ninth through twelfth graders said they had had sexual intercourse.[3] One quarter of both sexually active grade groups had had sex with four or more partners in their lifetime. Two thirds of the sexually active seventh and eighth graders reported that their first sexual intercourse had occurred before the age of 13. Less than half of sexually active students used any effective contraception the last time they had intercourse. Concerning substance use, the survey reported that the incidence of alcohol use in the previous month was 31 percent for the younger grade group and 49 percent for the older students. Marijuana use in the previous month was 16 percent and 29 percent respectively for each group. Ten percent of seventh and eighth graders and 17 percent of older students had used some other illegal drug in their lifetime. Injection drug use was not specifically surveyed.

Health providers traditionally have assumed the dual roles of treating illness and promoting health and well-being. In the latter role providers screen, educate and counsel their healthy patients not only to prevent illness but to assure that their patients may achieve their full potential for physical, psychological and social well-being. Several professional guidelines and standards of practice related to adolescent preventive health care have been established.[4,5,6,7] Most of these specifically affirm the responsibility of health providers to discuss in a substantive way HIV and HIV-related risk behaviors with their adolescent patients. The American Medical Association's 1992 Guidelines for Adolescent Preventive Services (GAPS) is considered by many to be the current "gold standard" of adolescent preventive health care.[8] GAPS recommends that health providers see their adolescent patients yearly between the ages of eleven and twenty-one years. At each visit there should be an age-appropriate discussion of a wide range of health issues, including substance use, psychosexual development and sexual behaviors including specific discussion of abstinence, HIV and safer sex. It also recommends that policies on the provision of confidential care to adolescents be established in all clinical settings. Professional organizations, such as the American Academy of Pediatrics, have also espoused the principal of every child and adolescent having a "medical home" where health care would be provided in an "accessible, continuous, comprehensive, family centered, coordinated and compassionate" manner.[9] Medical student, resident physician and

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Correspondence concerning this article should be addressed to:

Robert J. Bidwell M.D.
Department of Pediatrics
John A. Burns School of Medicine
University of Hawaii
1319 Punahou Street
Honolulu, HI 96826

nursing training curricula at the University of Hawaii also emphasize the need for health providers to address the entire breadth of medical and psychosocial issues with adolescent patients on a regular basis.

Despite the recognition that health providers have a responsibility to join in efforts to prevent adolescent HIV risk behaviors, there is considerable evidence that they may not be fulfilling this role. Survey research has shown that many physicians, for example, do not routinely take a sexual history of their adolescent patients or provide counselling about HIV, sexuality or a variety of other HIV risk behaviors.[10,11] Marks et al reported in 1990 that only one in ten pediatricians regularly saw teens for sexuality-related concerns or substance use.[12] Fewer than half provided anticipatory guidance related to sexuality. Bradford and Lyon's study of Pittsburgh pediatricians showed that only 35 percent provided AIDS counselling to adolescent patients and a minority provided any gynecologic (29%), family planning (20%), drug and alcohol (27%) or depression (33%) counselling.[13] Only 32 percent acknowledged "always" or "frequently" discussing AIDS with their teen patients.

A survey of Washington, D.C. physicians found that sexual histories were taken in only 60 percent of new teen patient visits and less than half of continuing patient visits.[14] Blum et al in 1995 reported on a chart review survey of adolescent patients in four settings—private pediatric practice, family practice, a school based clinic and a community teen clinic.[15] Less than 45 percent of charts in each setting reflected any screening in the areas of emotional health, sexuality or substance use. The highest rates of documented screening were in the teen and school based clinics. The lowest rate of screening was in pediatricians' offices. In contrast, physical health screening was documented in more than 95 percent of all clinics' charts. Nussbaum et al demonstrated that physicians' gender may influence the willingness to discuss sexuality with teen patients.[16] They found that 88% of female pediatricians but only 39% of male pediatricians routinely took sexual histories of fourteen to fifteen year old girls. A significant differential appeared even among sixteen to seventeen year old girls, with overall only 69% of pediatricians willing to discuss sexuality.

Survey research indicates that many physicians feel untrained and uncomfortable in discussing HIV-related issues with adolescents.[17] In 1978 The American Academy of Pediatrics Task Force on Pediatric Education cited knowledge and skills in adolescent medicine as among the major deficits in pediatric practice.[18] Blum and Bearinger in 1990 reported that nearly half of physicians in a national survey (including pediatricians, family practitioners and internists) felt insufficient training was a significant barrier to working with adolescents.[19] Among areas of perceived inadequate training were alcohol/drug abuse (39%), homosexuality (54%), STDs (16%), family planning (22%) and delinquency (55%). Seventy-four percent of physicians acknowledged that adolescents were their least-preferred age group. Only 32 percent were interested in improving their perceived deficits in working with teens. Levenson et al in 1986 found that only 13 percent of pediatricians felt they were adolescents' preferred source for health information, with only 3 percent ranking themselves as the most frequently used source.[20] In the study by Marks et al, most pediatricians said that adolescents rarely came to them for mental health or sexuality issues.[12] Reports indicate that pediatricians feel less competent in sexuality-related care than other primary care specialists.[21,22,23] Bradford's survey of Pittsburgh pediatricians found low levels of comfort in addressing various adolescent health issues related to HIV, with only about half of physicians comfortable in discussing sexuality, HIV or STDs.[13]

Several surveys have shown that adolescents see physicians as one of the most authoritative sources of health-related information.[24,25] Furthermore, teens list sexuality, substance use and HIV as among the subjects they are most interested in discussing with physicians.[20,26] Other adolescent surveys, however, tend to confirm the picture of physicians unable or unwilling to discuss HIV and associated risk behaviors. A study by Hingson found that although 80 percent of the teen respondents had seen a physician in the past year only 13 percent had been counselled about AIDS.[27] In fact in several surveys, adolescents ranked physicians last as an actual source of information about HIV or sexuality.[28,29] Joffe et al reported in 1988 that three-fourths of college freshmen had received no counselling on eleven of fifteen topics they were most interested in discussing with a physician, including STDs, contraception, alcohol/drug use or depression.[30] Overall, internists were more likely to provide counselling than pediatricians or family/general practitioners. A survey of Boston 9th and 12th graders by Rawitscher et al, found that a majority of students wanted information about HIV, STDs, sex and condoms.[31] They would like a physician to discuss with them their personal experiences related to these same issues, but most would be uncomfortable initiating a discussion of these on their own. Only 37 percent of the 12th graders had ever discussed sex and 28 percent had ever discussed HIV/AIDS with a physician.

When queried about perceived barriers to working with adolescents, physicians cite lack of training, time constraints, inadequate reimbursement, physician image, physician discomfort, office setting, confidentiality concerns, and a generally alienating system of care.[12,15,20,32,33] There are clearly other barriers to the provision of quality health care to adolescents. While most surveys suggest that over half of teens see a physician at least once a year,[34,35] many of these contacts may be for acute illness or sports physicals and may not include discussions of adolescent risk behaviors.[23,36] In a national survey of office visits by adolescents it was found that the mean duration of visit for adolescent patients was fourteen minutes.[37] Marks et al reported in their survey of suburban New York pediatricians that an average of twenty-eight patients were seen in a seven hour clinic day.[12] The average office visit lasted fifteen minutes and only a small minority of physicians scheduled longer visits for new or returning adolescent patients.

Because there is evidence that the risk for HIV infection among Hawaii's adolescents is real and because research in other communities suggests that health providers may not always be meeting adolescents' needs in the area of HIV prevention, it is important to obtain a better understanding of adolescents' perspectives on HIV and the relevance of Hawaii's health care providers. A previous study conducted by the authors attempted to evaluate the responsiveness of health clinics, social service agencies and schools to the challenge of HIV-prevention among Kalihi-Palama youths.[38] In general, health clinics appeared most responsive, although often in a tertiary prevention mode, with little outreach and relatively few teens contacts. The present study looks at the other side of the coin. In order to allow adolescents a relatively unstructured opportunity to express their perceptions related to HIV-related issues, a qualitative study design was developed. Through a serious of focus groups, adolescents were asked to describe the meaning of HIV in their lives. Through succeeding focus groups, patterns of teen experience and perceptions became apparent. These patterns related to adolescents' HIV-related knowledge, behaviors, perceptions of risk, perceptions of HIV-prevention messages, and the role and relevance of health providers in their lives. Based on these findings, recommendations are presented that may enhance the role of health care providers in the prevention of HIV infection among Hawaii's adolescents.


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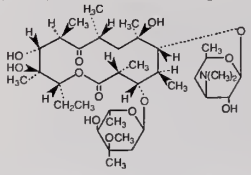
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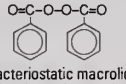
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Description: Each gram of Benzamycin® (erythromycin— benzoyl peroxide) topical gel contains, as dispensed, 30 mg (3%) active erythromycin and 50 mg (5%) benzoyl peroxide in a gel vehicle of purified water, carbomer 940, alcohol 20%, sodium hydroxide, docusate sodium and fragrance.

Erythromycin ($C_{37}H_{67}NO_{13}$) is produced by a strain of *Streptomyces erythraeus* and belongs to the macrolide group of antibiotics. Erythromycin has a molecular weight of 733.94 and is represented by the following structural formula:



Benzoyl peroxide ($C_{14}H_{10}O_4$) is an antibacterial and keratolytic agent. The structural formula is:



Clinical Pharmacology: Erythromycin is a bacteriostatic macrolide antibiotic, but may be bactericidal in high concentrations. Although the mechanism by which erythromycin acts in reducing inflammatory lesions of acne vulgaris is unknown, it is presumably due to its antibiotic action. Antagonism has been demonstrated between clindamycin and erythromycin.

Benzoyl peroxide is an antibacterial agent which has been shown to be effective against *Propionibacterium acnes*, an anaerobe found in sebaceous follicles and comedones. The antibacterial action of benzoyl peroxide is believed to be due to the release of active oxygen. Benzoyl peroxide has a keratolytic and desquamative effect which may also contribute to its efficacy.

Benzoyl peroxide has been shown to be absorbed by the skin where it is converted to benzoic acid.

Indications and Usage: Benzamycin Topical Gel is indicated for the topical control of acne vulgaris.

Contraindications: Benzamycin Topical Gel is contraindicated in those patients with a history of hypersensitivity to erythromycin, benzoyl peroxide or any of the other listed ingredients.

Precautions: General—For external use only. Not for ophthalmic use. Avoid contact with eyes and mucous membranes. Concomitant topical acne therapy should be used with caution because a possible cumulative irritancy effect may occur, especially with peeling, desquamating or abrasive agents. If severe irritation develops, discontinue use and institute appropriate therapy.

The use of antibiotic agents may be associated with the overgrowth of antibiotic-resistant organisms. If this occurs, administration of this drug should be discontinued and appropriate measures taken.

Information for Patients—Patients using Benzamycin Topical Gel should receive the following information and instructions:

1. Benzamycin Topical Gel is for external use only. Avoid contact with the eyes and mucous membranes.
2. Patient should not use any other topical acne preparation unless otherwise directed by physician.
3. Benzamycin Topical Gel may bleach hair or colored fabric.
4. If excessive irritation or dryness should occur, patient should discontinue medication and consult physician.
5. Discard product after 3 months and obtain fresh material.

Carcinogenesis, Mutagenesis and Impairment of Fertility: Long-term studies in animals have not been performed to evaluate carcinogenic potential or the effect on fertility.

Pregnancy Category C: Animal reproduction studies have not been conducted with Benzamycin® Topical Gel. It is also not known whether Benzamycin Topical Gel can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Benzamycin Topical Gel should be given to a pregnant woman only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Benzamycin Topical Gel is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children below the age of 12 have not been established.

Adverse Reactions: Adverse reactions which may occur include dryness, erythema and pruritus. Of a total of 153 patients treated with Benzamycin Topical Gel during clinical trials, 4 patients experienced adverse reactions, of whom three experienced dryness and one an urticarial reaction which responded well to symptomatic treatment.

Dosage and Administration: Benzamycin Topical Gel should be applied twice daily, morning and evening, or as directed by physician, to affected areas after the skin is thoroughly washed, rinsed with warm water and gently patted dry.

How Supplied and Compounding Directions:

Size (Net Weight)	NOC 0066-	Benzoyl Peroxide Gel	Active Erythromycin Powder (In Plastic Vial)	Ethyl Alcohol (70%) To Be Added
23.3 grams (as dispensed)	0510-23	20 grams	0.8 grams	3 mL
46.6 grams (as dispensed)	0510-46	40 grams	1.6 grams	6 mL

Prior to dispensing, tap vial until all powder flows freely. Add the indicated amount of ethyl alcohol (70%) to vial (to the mark) and immediately shake to completely dissolve erythromycin. Add this solution to gel and stir until homogeneous in appearance (1 to 1½ minutes). Benzamycin Topical Gel should then be stored under refrigeration. Do not freeze. Place a 3-month expiration date on the label.

NOTE: *Prior* to reconstitution, store at room temperature. *After* reconstitution, store under refrigeration. Do not freeze. Keep tightly closed. Keep out of the reach of children.

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Methods

A total of 125 Kalihi-Palama youth (66 females and 59 males) between the ages of 12 and 19 participated in focus group interviews over the course of six months. Participants were recruited through word-of-mouth and flyers distributed by health, social and educational providers in the neighborhood. Nineteen separate same or mixed gender groups were conducted. Group size ranged from 2 to 15 and most participants within each focus group were known to each other prior to participation. Most youths were of Asian, Pacific Islander, or "cosmopolitan" background.

Using a modified Grounded Theory approach[39] topic order and content across focus groups continually evolved over the course of the study. All group discussions were recorded and transcribed verbatim. Findings for each group were examined and further clarified in one or more subsequent groups. As new ideas and insights emerged, they were pursued in subsequent groups. Group facilitators used probes for clarification, validation of what was being said, and encouragement for active participation. Final transcripts were coded using The Ethnograph V4.0,[40] a computer-based qualitative text management program, which allowed for further data analysis and provides a stored record of all discussions, coded by content topic.*

Results

One of the most striking findings of this study was the participants' eagerness to discuss HIV within the broader context of their lives. They expressed a clear preference for a group setting in which they were not lectured at or judged, but had complete freedom to express and explain their feelings, perceptions and experience. As one teen noted, "At school, they lecture. They just talk. They no like let us talk. And it gets boring, yeah?, after a while. But like you guys asking us, and it's fun communicating." It was in the context of these open discussions that the teenagers taught us about the meaning of HIV in their lives, and the perceived relevance of health providers.

Adolescent Experience of HIV

In a previous article, the authors discuss in greater detail adolescents' construction of HIV and HIV-prevention.[41] To summarize, the teen participants generally view HIV in negative terms with a range of emotional responses—fear, anger, and sadness—often connected to the expectation of social ostracism or death. Despite the strong emotional response, there was an admission that HIV was seldom discussed with family or friends, except perhaps in a bantering manner. It also was agreed that the risk of HIV was generally not on the minds of participants in the minutes preceding risky behaviors (usually unprotected sex) though occasionally it might be after the act was completed. The possibility of pregnancy appeared to be more consciously considered than HIV in these situations. In general, any post-coital concerns about HIV were short-lived.

Knowledge and Perceptions of Risk

In general, the teen participants showed good knowledge of HIV, its effects on the immune system, associated risk behaviors and safer sex practices. When misconceptions were expressed, the groups were often self-correcting as other participants provided more accurate information. Misconceptions were usually

*A more detailed description of participants, participant recruitment, and focus group procedures is provided in Mueller et al., 1996.[41]

in the direction of overestimating risk (for example, transmission by mosquitoes) rather than denying the danger of known risk behaviors. Perhaps related to this was the participants' marked overestimation of HIV prevalence among their teen peers with estimates ranging from 25 to 75 percent of Hawaii's adolescents being HIV-positive. However, only one teen acknowledged knowing personally another teen who was HIV positive.

HIV Risk Behavior

Despite good knowledge of HIV and personal perceptions of risk, about half of the teen participants acknowledged being sexually active. Very few reported using condoms consistently; in fact, most did not use condoms at all. Both boys and girls generally believed that responsibility for deciding to have sex or use condoms lay equally with both partners. Many reasons were presented to explain the onset of sexual activity (eg., peer pressure; "fun") and the failure to use condoms (eg., "no like"; boring; "don't think, no like stop"). None of the participants openly reported either homosexual or bisexual behaviors. Repeatedly, the teens spoke of sex taking place in the context of concurrent alcohol and drug use. Several groups described "house parties", "hotel parties" and "beach parties", where youths of a variety of ages come together unchaperoned to partake in an abundant availability of drugs and sex.

While drug use was acknowledged by most of the teen participants, none spoke of personal use of injection drugs, including steroids. However, many of the teens had self- and friend-applied tattoos, which often involves the sharing of needles.

Perception of HIV Messages and Messengers

Schools, television, radio and newspapers were cited most often as providing information about HIV. Teen-focused media messages were felt to be no more effective than school health class curricula in providing information or changing behaviors related to HIV. In fact, the teens appeared skeptical that any of these isolated attempts to influence behavior would be successful. When asked how HIV messages could be made more effective, the teens appeared to take upon themselves the responsibility for change, or lack of it. As one boy put it, "It's up to you. You make your choices. If you take the wrong, it's your fault....Right now we're walking a line between choices; and if you take the wrong path, then it's up to us....to walk out there and walk the right path."

Those "messengers" viewed most positively were the counselors, teachers, and others who took the time to talk with the teens about their lives without lecturing or judgement. These relationships allowed the teens to be more open and honest in discussing their risk behaviors and concerns.

Perceptions of Health Care Providers

How do teens see health care providers in relation to their general health and risk for HIV? The participants in this study gave the distinct impression that health providers are relatively peripheral figures in their lives. There was little indication that they are seen as significant sources of HIV information or have any special relevance to whether or not a youth might decide to engage in HIV risk behaviors. Among 125 youths in 19 groups, only two mentioned health providers or clinics as somewhere they would go to ask about HIV if they had concerns about it. Only one teen indicated that she had gone to a clinic where there had been a discussion of HIV and safer sex and a provision of condoms.

In almost every group in which health providers were mentioned, the discussion was brief and in terms that portrayed providers as primarily technicians—people one might go to for the human equivalent of an auto tune-up or safety check. Even with strong prompting, teens gave little indication that they would consider going to health providers for health information or a discussion of personal problems or concerns that were not directly medical in nature. Health providers and clinics, as described by these teens, are places one would go to get a physical exam or "check-up", a blood test for HIV, an STD check, a pregnancy test or for medicine to treat an illness. One teen, when asked if a health provider had ever talked to him about violence, drugs, sex or HIV, answered, "No. They no say about HIV. No talk about gangs, nothing. They are just there for give me medicine." Another teen in the same group responded, "Should get more doctors talk to you one on one, talk to you about AIDS and all that stuff...cause every time you check-up for one appointment, they would be someone telling you about not doing this, not doing that, right? And you will always have 'em in your head, about that thing...."

Teens come into contact with health providers in a number of settings including at school, in clinics and through the media. However, most references to health providers in this study were related to going to a provider, usually for the treatment of some medical problem. Interestingly, this was often put in terms of going to a building or place—"Kapiolani", "Kaiser", "KKV", "Kalihi-Palama", or "clinic"—rather than to a specific individual or type of provider (eg, doctor or nurse). A number of participants could not recall where they went for care, giving vague approximations such as "down by Liliha." School nurses were not mentioned in any of the focus groups.

Discussion

Local adolescent behavioral surveys and Hawaii age-specific HIV/AIDS data indicate that Hawaii's adolescents are at real risk for HIV infection. A large percentage of Hawaii's teens are sexually active and as the teen participants in this study indicated, alcohol and drugs often serve as social "lubricants" that facilitate the onset of sexual activity. While health care providers are logical players in the effort to prevent HIV infection among teens, research in other communities suggests they may not be fulfilling this role. With insufficient training or interest, and an average office visit of 14 minutes, it is difficult to address issues such as home life, school performance, extracurricular activities, drugs, sex and depression in a meaningful way. The teen participants in this study, like those in other communities, generally perceive Hawaii's health care providers as distant figures, technicians whose function is to diagnose illness and provide medicine.

A caveat or two are in order. It would be unfair to suggest that all health care providers fit this perception. Many providers undoubtedly do an exemplary job of promoting teen health and others do the best they can do within imperfect settings and systems of health care delivery. Furthermore, the teen participants of this study are representative only of themselves and not of all Hawaii's teens or even of all teens in Kalihi-Palama. In a group setting it was not always possible to explore the nuances of teens' perceptions related to health providers. The picture they painted was therefore necessarily done in broad strokes. Nevertheless, these youths came from diverse backgrounds and spoke openly about their lives. Their observations are instructive and can help health care providers reflect on their work with teens and consider opportunities to increase their relevance in the fight against HIV.

How might health care providers become more relevant to their teen patients/clients? Changes might occur both in the context of present practice settings and at a systemic level. In a health provider's office or clinic setting, there could be a shift from the "medical home" model, viewed narrowly by teens in this study, to a "health home" model. In a "health home" a teenager would not only get

"check-ups", immunizations or blood tests but would on a yearly basis sit down with a health provider to talk about both medical and psychosocial health issues (as recommended by GAPS). These meetings would be confidential two-way discussions and would help increase trust and openness between both teen and provider. This study and many others confirm the generally high level of HIV knowledge among teens. This suggests that providers should avoid knowledge-only based discussions and spend more time discussing in depth teens' behaviors, perceptions and concerns in the broader context of their lives. Such visits would provide a lifelong model for the teen demonstrating the breadth of health issues a provider should be able to address. Such visits will necessarily be longer than traditional visits. For example, some providers schedule 45 minutes for all new teen patients and 30 minutes for continuing patients who have not been seen recently.

Providers in group practice, community health centers and other settings might explore the usefulness of reaching teens through a group discussion format. One of the most significant findings of this study is the ability of teens to engage in open and lively discussions of their lives. The authors found that the groups were most responsive when they were made up of peer friendship groups, and were facilitated in a flexible, nonlecturing, nonjudgemental style. Refreshments also seem to help. Such groups may be a more efficient and meaningful way of reaching larger numbers of teens and helping them see health providers in a new light.

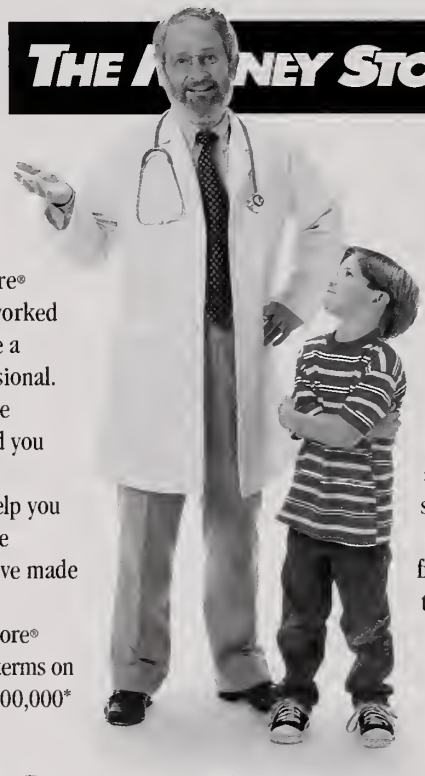
Systemically, there are other actions that could help improve the relevance of health care providers in promoting adolescent health. Curricula in adolescent health, both for health providers in training as well as for those already in the community, must go beyond simply the development of adolescent health screening and counseling skills. These skills, while essential, will not be implemented without an honest discussion of the practical aspects of how to employ them in the context of busy and cost-conscious health care settings. Secondly, managed care systems could work together with health providers to develop local "gold standards" for adolescent "well-teen" and acute care visits. Through periodic and thorough quality assurance chart reviews, managed care programs can assure that their clients/patients are receiving the quality care they deserve from networks of providers. Additionally, consumers (in this case teens and their parents) need to be educated about what kind of services their health providers should be offering. In relation to adolescent health this means the provision of confidential and comprehensive care through yearly visits that cover both medical and psychosocial concerns. A 14 minute visit should lead consumers to shop elsewhere.

There are also opportunities for providers to go beyond the walls of their offices to reach teens in other settings. Many have done so already through advocacy activities, developing community health screening programs, volunteering as sports team health providers, or as speakers in school health classes. Another community involvement could be through taking part in the expansion of Hawaii's school-based and school-linked health centers. In the past, some providers have opposed such centers because they were seen as interfering with the "medical home". This study has shown us that in this respect, many teens are "homeless". Physicians and other health care providers can take a lead in resurrecting the concept of comprehensive school health centers and create a true "health home" model for adolescents in partnership with other community health care providers.

Given the present system of health care deliv-

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ery, health care providers may never be the primary players in the promotion of adolescent health. The responsibility for assuring teen health is shared with teachers, counselors, social workers, clergy, government officials, the media, families and teens themselves. Nevertheless, the participation of health care providers is essential, because of their special expertise, respected position in the community and their true concern for the health of young people.

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Council Highlights

September 13, 1996
Roger Kimura MD, Secretary

The meeting was called to order by Dr Carl Lehman, President at 5:35 p.m. Present: J. Spangler, President-elect; L. Howard, Treasruer; R. Kimura, Secretary; F. Holschuh, Immediate Past President; AMA Delegate: C. Kam, R. Stodd; AMA Alternate Delegate: A. Kunimoto; Speaker: H.K.W. Chinn; County Presidents: E. Bade, T. Crane, T. Smith; Councilors: T. Au, P. Chinn, P. DeMare, M. Shirasu, W. Young, B. Shitamoto; Past Presidents: J. McDonnell, Medical Students: J. Ing & D. Onaga; Young Physician Delegate: C. Goto.

HMA Staff: J. Won, B. Kendro, N. Jones, L. Tong, J. Asato, P. Kawamoto, A. Rogness-recording secretary.

Minutes: The minutes of the August 2 meeting were approved with corrections.

• Dr Lehman reported; 1) that a HMA Workers' Compensation seminar is scheduled for September 23 at 5:30; 2) He met with the freshman medical students on August 9; 3) He joined others with Mayor Jeremy Harris for a breakfast meeting; 4) Drs DeMare and Lehman met with press and media regarding FDA authority to regulate advertising and selling of cigarettes, especially to minors; 5) he was interviewed by Sandra Sagisi of KGMB regarding reform of health insurance and fraud and abuse; 6) Drs L. Howard and Lehman attended a 2 hour Welfare Reform Task Force session encouraging training for a life of independence. 7) he encourages physicians to sign up with the AMA's Grass Roots Hot Line by calling 1-800-833-6354 and entering the ME number on your AMA membership card. You may also check the AMA Grass Roots Home Page which provides up-to-date information on political action from the AMA; 8) The Gang of Six met and discussed the decrease of Medicaid funds.

• Dr Lehman thanked Council and members of the HMA for the privilege of serving as President of the organization. Dr Holschuh, Immediate Past President of the HMA thanked Dr Lehman on behalf of Council for his dedication and hard work throughout the year. A round of applause was given and a lei presented to Dr Lehman.

• Mrs. Gutteling , President HMA Alliance read her extensive annual report on the fundraisers, and projects done throughout the year on behalf of physician members.

For Action

1) Council approved the Finance Committee recommendations that; a) HMA change auditors and approved the extra funds for next year's audit; b) Mr. Vernon Woo, outside legal counsel who was on retainer be placed on a fee-for-service status effective 10/1/96; c) to change portfolio management companies from East Pacific Investment to SEI, for HMA's employee pension fund and provide, for HMA members office pension plans and, personal portfolios ; d) the HCMS contract fee be reduced to $6,000; e) the proposed draft of the budget for 1997 be approved for submission to the House of Delegates in October.

2)Council approved the Hawaii Physician Alliance, Inc.'s request to do a presentation at the annual meeting on their for-profit MSO.

3)Council passed a motion that the Membership Benefits Committee investigate a better Hawaii Medical Library rate for all physicians in Hawaii.

4)Council approved the Tobacco Task Force's recommendation to request monies with the American Cancer Society, for a grant on tobacco prevention and the HMA provide inkind services such as, use of meeting rooms, clerical equipment, etc. Council also approved the committee's recommendation that Dr Shirasu and HMA staff make every effort to make space available at the annual meeting so the Tobacco Task Force and the State of Hawaii Tobacco Prevention and Education Committee and Domestic Violence Division can display information.

5)Council approved of the concept of electing two Alternate Delegates. They would atttend AMA meetings at their own expense. The HMA President previously served as an alternate.

Component Society Reports

Honolulu - Dr P. Blanchette is continuing to visit hospitals and physician meetings to promote the benefits of joining the HCMS. Her next visits will be at Wahiawa and Kuakini Hospital. The topic to be discussed at the first general membership meeting will be the new MSO.

Kauai - Dr T. Crane reported that Kauai County is looking forward to the annual meeting. He also brought up the discussion of fees charged for using the Hawaii Medical Library. Please refer to action item on this issue.

Hawaii - Dr E. Bade reported that their County did not meet this past month, however will be meeting in a couple of weeks for the election of officers.

For Information

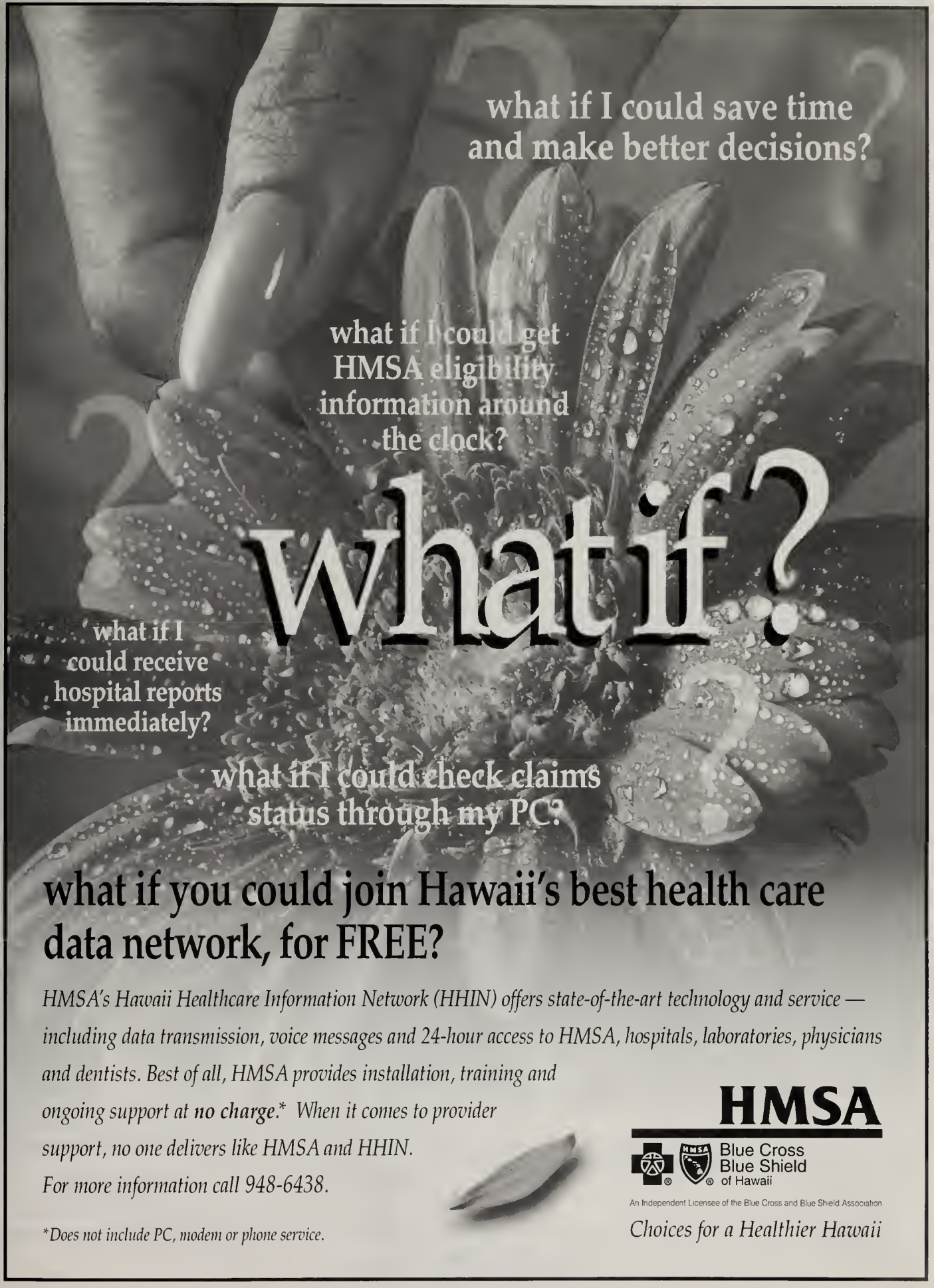
Fetal Alcohol Syndrome Conference: This conference will be held in October 1997 by the Hawaii State Foster Parents Association and is asking for HMA's support in volunteers, materials and supplies, etc. This is being referred to the Maternal Perinatal Mortality Study Committee and Children and Youth Committee for discussion.

HMA/CIVS.—Two meetings have been held with 4 organizations who are considering the service at the present time.

Strategic Planning.—Dr Lehman reported that the HMA held a strategic planning session and are awaiting Mr. Bruce Balfe's (of the AMA) report on the session and suggested areas of change.

Coalition for Quality End-of-Life Care.—The HMA Committee on Ethical Concerns will be writing a resolution on the issue and bringing it to the House of Delegates.

Meeting was adjourned at 7:45 p.m.



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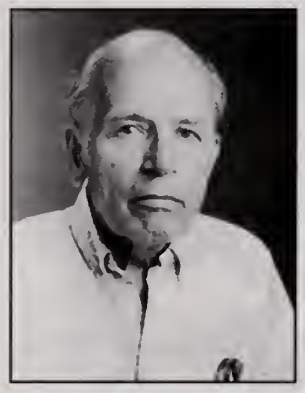
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Choices for a Healthier Hawaii

A Victory for Physician-Assisted Suicide

by A.A. Smyser

Reprinted from the Star-Bulletin 3/19/96, Hawaii's World



Bud Smyser

Editor's Note:
These two issues of Bud Smyser's "Hawaii World" Star-Bulletin articles continue our series on Death with Dignity, reprinted with the permission of the Honolulu Star-Bulletin and the author. The jury is still out on the final decision. Look for the Special Issue on Death with Dignity in December.

It has not been fully grasped, but in Hawaii and eight other Western states it has been legal since March 6 to assist a suicide. It probably will remain so at least until that day's 8-3 ruling of the 9th U.S. Circuit Court of Appeals is appealed to the U.S. Supreme Court.

Washington state, whose law against assisted suicide was overturned, has until early June to file an appeal. The current legality of assisting a suicide is confirmed by Hawaii's senior judge on the appeals court, Herbert S. Choy. He was not on the panel that heard the Washington case but he is one of 13 senior (or retired) judges who still help the 25 active judges with their heavy caseload.

Even though a window of opportunity is open to legally assist suicides in the Western U.S. I know of no evidence that doctors, patients or even right-to-die organizations are rushing through it.

There are at least three reasons why:

- Everyone is cautious, doctors included. The window could close again if Washington appeals, as expected, and gets a stay order.
- Rules and regulations are not in place.
- Without a doctor's help, right-to-die candidates and their friends will have a hard time laying their hands on the medications needed to do the job.

Barbiturates are the drugs of choice, I was told by Dr Richard MacDonald, who is the national medical adviser for Hemlock U.S.A. Plenty of doctors know how to use them. He says: (1) start with an anti-nausea medication, (2) take the barbiturates mixed in something like orange juice to get rid of the bad taste, (3) drink something to speed up absorption in the blood stream. Booze will do.

Trouble is a lot of pharmacies don't even stock the barbiturates any more because doctors hardly ever prescribe them, MacDonald says. Other effective and non-toxic sedatives have taken their place.

You might get them in Mexico. Even there you would need a doctor's prescription. In some cases this could be fast and cheap but there's no general rule.

And going ahead on a do-it-yourself basis without a doctor standing by could be botched, lead to emergency room care and even prolonged disablement.

The plastic bag method of taking a sleeping pill, then pulling a plastic bag over your head and fastening it tight around your neck with a rubber band also has had a few grotesque failures. It is unattractive for survivors even when it works.

The very clear social goal of all right-to-die advocates should be to have the process safe and even pleasant when a case justifies such help—and is a confirmed and reconfirmed conscious choice of the subject.

Derek Humphry, author of "Final Exit," which prescribes dosages, has described cases of family and friends gathering around for "departures," or at least just before the final act, and going away with very good feelings. I'd find it comforting to check out the way myself at the right time.

The 11 member court decision includes over 150 pages of the majority judgment plus dissents. The majority ruling written by Judge Stephen Reinhardt is said to be carefully crafted to stand by itself as a strong, persuasive presentation to the U.S. Supreme Court.

The high court in 1990 upheld a constitutional right to die in a complicated Missouri case that left controls to the states. It hasn't yet ruled, however, on the right to assist a death.

Newly available and commended by Hemlock U.S.A. sources is "A Model State Act to Authorize and Regulate Physician-Assisted Suicide." It was developed by a panel of nine doctors, lawyers and scholars and published in the Harvard Journal on Legislation, Volume 33, issued in January. More on it in a future column.

A Model Law on Physician-Assisted Suicide

by A.A. Smyser

Reprinted from the Star-Bulletin 3/21/96, Hawaii's World

On a very timely basis, the Harvard University Law School's Journal on Legislation has come up with "A Model State Act to Authorize and Regulate Physician-Assisted Suicide."

It is timely because, by a U.S. appeals court decision, a window of opportunity for such deaths is open right now in Hawaii and eight other Western states. The U.S. Supreme Court conceivably could extend the opportunity nationally as early as next year by upholding the Western region decision.

The model act in many respects matches a law approved by Oregon voters in a 1994 referendum but meets several of the objections to that act raised by a federal district judge in Oregon.

The nine authors of the proposed law—two years in the drafting—are from the fields of law, medicine, philosophy and economics. Their spokesperson is Charles H. Baron, professor of law at Boston College. Their product is detailed in Volume 33,

Continued on Page 217

News and Notes Henry N. Yokoyama MD

Life in These Parts

Miscellany

Doctor on Board

An ophthalmologist colleague recounts the following vignette. He had just settled down into his seat on an Air France flight bound for Paris holiday. Once airborne, he noticed a gentleman across the aisle drinking, rather a lot. He would order another glass as soon as he finished one and the pattern continued for sometime.

The gentleman got up to make his way to the back of the jet, no doubt to relieve a certain urgency. There was big thud—the man had collapsed in the aisle. The other passengers gathered around and the flight attendant got alarmed. Soon there was a call overhead, "Is there a doctor on board?"

My colleague had hoped to remain anonymous, but he made himself known to the attendant. As they walked to the rear of the aircraft, he wondered what he'd do. "Yes, opthalmologists are doctors too, but the man certainly doesn't need an acute refraction."

The patient was lying face down, semi-conscious. He was roused and offered his services.

"Can I help you? I'm a doctor."

"So am I," the patient replied looking at my colleague through the corner of his eye.

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"Just too much damn champagne!"
Shafiq Qaadri Toronto—Stitches, October 94

Q. What did the Zen Buddhist say to the New York hot-dog vendor?

A. "Make me one with everything."

From Laughter, The Best Medicine
Reader's Digest June 96

Scene: The Oprah Winfrey Show
"Today, the subject is ghosts."
"How many of you believe in ghosts?" Most of the hands went up.
"How many of you have seen a ghost?"
A third of the hands went up.
"How many of you had sex with ghosts?"
A lone hand went up.
"You sir, when did you have sex with ghosts?"
"Oh, pardon me, Mam, I thought you said goats.

A Robert Kessler joke heard by humorist Myron Shirasu"

Community Acquired Pneumonia in the Managed Care Era:

Jeffrey Golden, Professor or Clinical Medicine, UCSF. July 22, 1996. Roy's Restaurant

General Discussion

500,000 patients are hospitalized with pneumonia each year and 10% of these hospitalized patients die because *antibiotics are started too late.*

Etiology of Pneumonias

Strep pneumonia; mycoplasma; viral; Legionella; Chlamydia; Hemophilus; Moranella...*But in 50% of cases, we never know the exact etiology.*

Pneumonia in elderly

- Etiology
 - Influenza 33.7%
 - Catarrhalis 31.4%
 - Pneumonia 7%
 - Mixed 17.4%
 - Gm negative
- Predisposing Factors
 - Aspiration and cigarette smoking.
- Elderly Hospitalizations
 - Mostly pneumococcal bacteremia.
 - Mortality: Overall 30.5%; ICU - 86%
- Clinical Features in Elderly pneumonia:
 - 27% lethal; *high index of suspicion necessary*
- Sx & Sy's in Elderly Pneumonia:
 - Confusion
 - Insidious deterioration
 - 40% lack fever & cough

***Acute confusion, lethargy, tachypnea*
"We need up front time with antibiotics. Treat Early & Treat Broadly"
***No typical clinical pattern whether the organism is pneumococcos, Legionella, or mycoplasma.

Office Evaluation

- *Chest Xrays:*
 - Takes 6 weeks to normalize
 - Lobar: typical
 - Diffusc: atypical
 - Pleural effusion: Tap if more than 24
- *Gram Stains*
 94%: correct antibiotics; pneumococcal resistance more than 40%
- *Sputum Culture*
 - Costs $39. vs. Hospitalization costing $4,500
- *Choice of Antibiotics*
 - Augmentin
 - Cephalosporin
 - CIPRO
 - New Macrolides

 eg **Zithromax:* 72 hour 1/2 life; Europe: 3 day therapy; in U.S.: 5 day therapy; high tissue level

Recommendations of the American Thoracic Society

- Sputum gram stain
- Chest X-ray
- Guidelines for therapy
 - Consider place of therapy
 - Cormorbidity of patient
 - Severity of illness
 - Choice of Therapy

 Use Macrolides (or Erythromycin and tetracyclines)

In Managed Care

- Do fewer tests and treat empirically viz
 - Monotherapy with the new macrolides
 - or Erythromycin with 2nd drug

On Lipid Management in the 90s

Truisms by Nancy Jean M. Vukovich Bohannon, MD FACP Associate Clinical Professor of Medicine, Family and Community Medicine, UCSF June 21, 1996. Kyoya

- Smokers in Japan have less CHD because of the low cholesterol Japanese diet
- Even with normal cholesterol levels, diabetics have more CHD (because of inability to metabolize cholesterol)
- The most common cause of MI under age 30 is diabetes
- Diabetics have more frozen shoulders, trigger fingers and hammer toes because of glycosolated tendons (Diabetics have difficulty getting their hands together for prayer)
- ACE inhibitors have a role in preventing CHD in diabetics
- 12.7 million people in the U.S. are candidates for cholesterol lowering drugs, but only 3 million are on cholesterol therapy
- 80% of diabetics die cardiovascular deaths
- PPPS (Provastatin Primary Prevention Study): 36% decrease in non-fatal MI; 22% decrease in total mortality
- 4S (Simvastatin Scandinavian Survival Study): 42% decrease in CAD mortality; 32% decrease in total mortality

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A Model Law on Physician-Assisted Suicide
Continued from Page 214

issued in January, of the Harvard Journal on Legislation.

They say they chose a long-form law, setting forth detailed procedures, instead of a short form, primarily protecting physicians from liability if the cases met certain criteria.

The long form, they acknowledge, is intrusive to the patient's privacy. It requires a request for assistance made on at least two separate occasions at least 14 days apart with no contrary expression in between.

It requires one verification in writing by another "responsible physician" and another by a licensed psychiatrist, clinical psychologist or psychiatric social worker. It requires that the patient be fully informed of other options such as hospice care and pain control.

All these records are to be filed with an appropriate state officer but considered confidential. They will not identify the patient except for a coded reference.

The argument for this intrusiveness is that it protects both physician and patients and guarantees against going down the "slippery slope" to casual suicide, even murder, that foes of assisted suicide say will be abused.

A distinction is made on "assisted suicide" in which a physician prescribes a potion and—preferably, say the authors—attends the death while the patient self-administers the potion. The model law does not approve the alternative of "euthanasia," in which the physician actively administers death.

All hospitals and health personnel who choose to abstain for reasons of conscience are protected, as are the people who help administer death so long as they meet the requirements of the law. Under the proposed law, life insurance could not be voided.

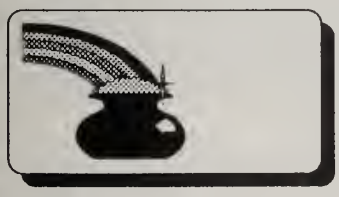
The privilege of physician-assisted death is limited to person 18 or older suffering "intractable and unbearable illness." This is defined as "a bodily disorder (1) that cannot be cured or successfully palliated, and (2) that causes such severe suffering that a patient prefers death."

This definition split the commission, with the minority favoring limiting assisted suicide to the terminally ill. The broader definition, the report says, could cover cases "such as AIDS, advanced emphysema, some forms of cancer, amyotrophic lateral sclerosis, multiple sclerosis and many other debilitating conditions."

One of Hawaii's leading thinkers on medical ethics is Kenneth Kipnis, professor of philosophy at the University of Hawaii. He says we must decide soon how to handle assisted suicide, yet are woefully unprepared. The Harvard proposal could provide a starting point for a Hawaii blue ribbon committee to develop a recommendation for the 1997 Legislature.

Editor's Note:
See "Some Ethical Principles for Adult Critical Care" by Kenneth Kipnis PhD and Anita Gerrard, MD. *Haw Med J.* 1995, 54142-484.

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The Weathervane

Its is best to stick to your principles—if you have any.

Treading where no other Hawaii physician has trod, and striking a major blow for medicine in party politics, Philip Hellreich, MD, Kailua dermatologist, was appointed to serve on the Republican Party Platform Committee in San Diego, California. Never the shy one, Phil was instrumental in placing planks in the platform to provide for (1) Medical Savings Accounts, (2) Elimination of fraud and abuse rules and (3) Elimination of the gag rules imposed by certain HMOs. Way to go, Phillip!

There's gold in them thar pigeons.

As if there weren't enough deception in the medical world, Summit Technology Chairman David Muller allegedly transferred 850,000 of his shares to an offshore company and sold them after he mysteriously received confidential documents form the FDA indicating that rival Visx excimer laser was "commercially more appealing." Once approved, Vixs's laser for photorefractive keratectomy (PRK) would likely far outsell Summit's laser. With release of the information Summit stock went from $22 in April to $6. Some angry investors have brought suit against Summit alleging illegalities in its FDA studies and in the manner in which it sold the laser and recorded revenues. How often investing doctors resemble those wooly ovine creatures obligingly lined up to donate their largesse to the clippers.

It's not an optical illusion. It just looks like one.

Perhaps you did not know that TWA flight 800 was carrying a box of donor corneas headed for France. Important point is that the box was carried in the cockpit of the Boeing 747, and no one ever opened it or inspected it after it departed the Baltimore eye bank.

The power of the state is always in inverse ratio to the power of the nation.

A rose by any other name would smell as sweet, or as pungent in this case. The Illinois Department of Public Health has challenged the Rush Eye Laser Center as to whether the center should be licensed under the state's Ambulatory Surgical Treatment Center Licensing Act. Like Hawaii's Certificate of Need law, the Illinois Department of Public Health controls ambulatory surgery centers, and perceives another area to exercise control over free enterprise in medical care. Despite reams of contrary evidence, CON laws prevail in many states, eliminating competition, protecting vested interest, and increasing the cost of medical care. Here in the land of Aloha, the Department of Accounting and General Services (DAGS) has said that the law does not control medical costs, and Governor Cayetano asked the legislature to do away with it. No way! It live on for at least another five years, because our legislature is so efficient in taking care of our entrenched institutions.

Old doctors never die. Young ones do.

A 33-year-old doctor was beaten, raped, sodomized and strangled in her office at Bellevue Hospital by a mentally ill, homeless man who had been secretly living in a hospital storage room. She was five months pregnant with her first child. Her husband brought suit claiming negligent security at the institution, and asked for $25 million. The city's lawyer offered $2 million to settle the case. Although witnesses acknowledged the hospital's fault and negligence, the jury decided against the widower and awarded no damages. Perhaps it is not relevant, however, juries appear to judge personal injury cases differently when taxpayers are the deep pocket.

The enemy of every honest man is the politician seeking power.

In Washington, your House of Representatives, ignoring recommendations from the AMA, elected by a vote of 212-210 to continue allowing tobacco growers to receive federally subsidized crop insurance and advice from agricultural extension agents. Critics of the $25 million program said that a crop that kills 400,000 smokers a year has no business getting government support. Not surprisingly, the vote was more regional than partisan.

There is almost nothing you can't be put in jail for now.

When dealing with the Internal Revenue Service, it is important to know when to call your attorney. A Houston plastic surgeon has been fighting the IRS for over 17 years although he did nothing wrong. A 1979 routine audit turned up no violations, but acting upon tips from two former employees, the IRS pursued the case. The Criminal Investigation Division was called in, and went around the doctor to obtain hospital records. Some hospitals gave in and revealed patients' records, names and addresses. Many of his patients were outraged, and blamed the doctor for the loss of confidentiality. In an unbelievably protracted case, there was no evidence that the doctor broke a single tax rule or underpaid his obligations by one cent, and ultimately the government has since cleared him fully of any wrongdoing. Yet, his many court campaigns include four trail-level proceedings , six federal appeals, and a petition to the US Supreme Court. The point here is that once a government agency begins an investigation, finds nothing serious, but has invested significant time and effort, instead of cutting losses, the investigation takes on a life of its own. As in the persistent persecution of Dr Zelko in Hilo over a prescription for appetite control, the agency goes to ridiculous lengths to try to nail the doctor. The ultimate sin is that those agents who cause so much personal damage to the reputation and peace of mind of the doctor and his family, are never brought to account for their transgressions.

Addenda

- Out of every tax dollar paid by New Yorkers, 21 cents goes for addiction and substance abuse. The total cost to NYC a monstrous $20 billion in 1994.
- Sex education in schools seems to have little or no effect on sexual activity, contraceptive use or teenage pregnancy.
- Beauty, is in the eye of the beerholder.

Aloha and keep the faith—rts.



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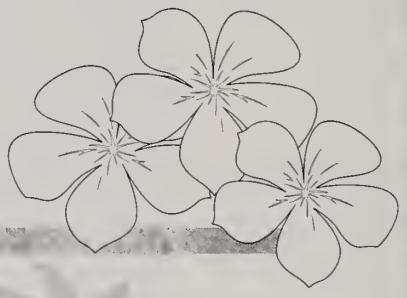
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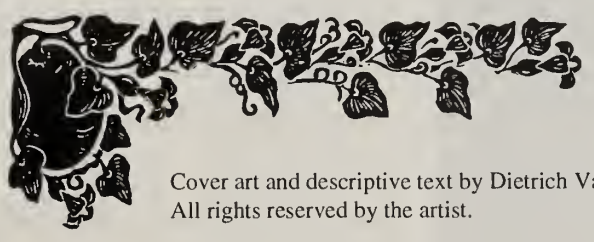
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Pakaka Nalu

Canoe surfing was a favorite sport of old Hawaii. Stories say that at times a paddler would leap from the canoe onto a regular surfboard to continue his ride.

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Editorial

Norman Goldstein MD

National Diabetes Awareness Month

Diabetes mellitus has been the subject of several manuscripts in the Hawaii Medical Journal in recent years.[1-3] Many physicians and their patients are, however, not aware of the many educational classes and screening programs available throughout the year and throughout the state, but especially this month.

Thanks to the **Hawaii Diabetes Awareness Coalition**, this information is being distributed in physicians' offices, hospital clinics, pharmacies, and even in supermarkets.

Professional conferences, public awareness programs and clinics are being emphasized this month, Diabetes Awareness Month.

A new brochure with dates and locations of these programs and clinics will be soon available. For supply of the Statewide Calendar of Events, contact the Hawaii State Diabetes Control Program at 587-3900, fax 587-3911, or a member of the coalition.

We will publish still another manuscript on diabetes by Richard Arakaki, MD soon. Because of production schedules, we were not able to publish it in this Diabetes Awareness Month, but do look for it in the January 1997 issue.

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Hawaii Diabetes Awareness Coalition — *Coalition Members*

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Letters to the Editor

On behalf of the Domestic Violence Task Force, we would like to express our great pleasure and appreciation of your recent issue on domestic violence (September 1996, Volume 55, No. 9). The problems of domestic violence continue to plague our communities, and we are always in need of the public's understanding and support to combat this insidious crime against society. The medical community plays a crucial role in helping us to recognize and remedy this situation, where the victim and families may be especially reluctant to acknowledge the abuse.

Your articles on family violence are informative, instructional, and courageous. Acknowledgment of professional responsibility represents a step so many are hesitant to take. That your issue offers both support and resources for those working with the victims of violence is commendable and deserving of widespread community notice. We would especially want to recognize Dr Florence Chinn, who is also a member of this subcommittee, for her hard work on putting together this issue.

Be assured that the impact of this special edition of the *Hawaii Medical Journal* will go beyond informing your medical community about domestic violence: it can result in saving lives of battered victims and start to address a pressing social and criminal issue.

As we strive toward the reduction of domestic violence in our community, it is good to know that we have such strong support from our friends at the *Hawaii Medical Journal.*

Tony Wong
Public Education and Awareness Subcommittee
Domestic Violence Task Force

Letter from the Editor—to the President

President Bill Clinton
The White House
1600 Pennsylvania Ave. NW
Washington, DC 20050
E-mail: President@WhiteHouse.GOV

Dear Mr President:

Your Director of Legislative Affairs, John Hillary, was quoted in a letter read at the House Judiciary Subcommittee hearing on Physician-Assisted Suicide as saying that, "The President has clearly expressed his personal opposition to Assisted Suicide, and remains of that view."

Mr President, more than 75% of Americans, overall, believe it should be legal for a doctor to help end a terminal patient's life if the patient and family want it. Most Americans see this issue as one of personal choice, like abortion, a right you have supported.

The purpose of the April 29 hearing was to focus a political attack on the power of the courts to invalidate law inconsistent with the Constitution. That wonderful document provides for change based upon judicial interpretation. Social reality says that medical techniques and drugs, better than ever, can indefinitely sustain life, even when life has become untenable to patients and families.

We request only that you study this matter and refrain from commenting upon Death with Dignity until you have the entire picture, the opinions of religious leaders withstanding. We are a

major social movement in the United States, and the fact that public opinion in most other countries also show a 70%+ favorable attitude to our cause indicates this is a human problem that should not be lightly considered.

Norman Goldstein MD, FACP
Clinical Professor, Medicine
John A. Burns School of Medicine, University of Hawaii

Reply from the President—to the Editor

Dear Norman:

Thank you for sharing your views. I am glad that you took the time to write and tell me where you stand. Knowing your thoughts and ideas about the issues facing our nation is very important to me.

I believe this Administration has made a great deal of progress since I took office over three-and-a-half years ago. I am proud of what we have done to reduce the deficit, expand our economy, improve educational opportunities, and empower hardworking Americans to make the most of their own lives. As we work to build on these accomplishments and to ensure peace and security at home and abroad, I hope you will remain involved.

Sincerely,



Bill Clinton

Comment from the Editor:
What a classic example of a "generic letter!"
Be sure to look for our December Special Issue on Death with Dignity.
Norman Goldstein, MD, editor.

HMA President's Message

John S. Spangler MD

Thanksgiving is a time for everyone to reflect on the events of this past year. We all have a great responsibility to continue a positive attitude about medical practice. During this last year many physicians have been under a great deal of anxiety and stress from the changing ways of the practice of medicine.

We all need to remember the sacrifices many people have done for us during our training and our post graduate training. Maintaining a stable and happy mental state with all the complex surrounding environment takes a very positive attitude.

With the coming year we hope all physicians could organize as one group to allow positive progress with the management of medicine. Let's hope all of us will be thankful for all we have and work towards patient care.

Military Medicine

Preparation of the injured patient for aeromedical evacuation: Environment and Physiology

Benjamin W. Berg, LTC, MC, USA

Aeromedical evacuation of the injured battlefield soldier has become the primary method of transport for battlefield military casualties since the Korean conflict. The lessons learned in armed conflict have been adapted by civilian evacuation and transport teams. Helicopter evacuation has become a central feature of successful trauma management systems throughout the world. In Hawaii transport for definitive care of patients at U.S. mainland facilities requires transport by fixed wing pressurized aircraft. The U.S. Army provides helicopter Medevac capability for the island of Oahu.

Knowledge of physiologic and environmental factors in the aviation environment is essential to the preparation of the patient for safe evacuation to definitive treatment facilities. The acromedical environment affords virtually no opportunity for assessment or therapy en-route, so stabilization prior to transport is critical. Physical stabilization of fractures and other injuries, and physiologic stabilization are ideally accomplished prior to evacuation. If stabilization is not possible expedient transport may be the only available option. A brief description of some primary factors influencing safety and preparation of the patient for air evacuation follows:

Environmental Factors

Rotary Wing Evacuation - Noise, Vibration and altitude factors.
Fixed Wing Evacuation - Hypobaric, hypoxic, low humidity and long duration of transport.
Temperature, humidity, and altitude all contribute to the safety profile of a medical evacuation. Interactions with specific injuries, such as burns, inhalation, and penetrating trauma can be anticipated and adverse effects minimized by careful planning and preparation.

Physiology

Barometric pressure changes which occur are of paramount importance in the safe evacuation of patients with chest tubes, penetrating thoracic trauma, or trapped gas. All chest tubes should be vented to the ambient air, and all intrathoracic air should be evacuated prior to transport. Trapped gas expansion phenomena in any body cavity can be clinically important. Sinus injuries, maxillofacial trauma, and pulmonary injury with air trapping afford opportunities for expansion of air under hypobaric conditions during evacuation. Preparation for management or prophylactic management prior to transportation is advised when adequate time and capability exist.

Relative hypoxemia is invariably present during air evacuation due to decreased PiO_2 in pressurized aircraft cabins, and during flights at altitude in non-pressurized aircraft. The magnitude of the physiologic effect can be determined by estimation of the resulting arterial PaO_2. Pulse oximetry during evacuation may allow adequate estimation of responses to oxygen therapy. Maintenance of oxygen delivery to critical organ beds is accomplished by transfusion and maintenance of oxyhemoglobin saturation of greater than 90%.

Management of ventilated patients is complicated and requires specialized equipment. Evacuation with a cuffed trachcostomy or endotracheal tube in place should be accomplished only after the cuff is inflated with water, or low volumes of air. Transport of ventilated patients should be avoided, if possible. Sophisticated transport ventilators are available. Pressurized gas or electric power sources are required.

Medical School Hotline

Native Hawaiian Culture Across the Curriculum at the John A. Burns School of Medicine

Doric Little, Ed.D.
Coordinator of Student Development

Iwalani Else, M.A.
Recruitment Coordinator, Oahu

The Native Hawaiian Center of Excellence at the John A. Burns School of Medicine (JABSOM) has documented Native Hawaiian culture across JABSOM's MD curriculum. Native Hawaiian culture appears in the following ways:

1. The Problem-Based Learning (PBL) curriculum utilizes elements of Native Hawaiian culture:
 a. PBL format stresses values which are dominant in Native Hawaiian culture.
 b. Native Hawaiian health problems and patients are introduced in the first two years of PBL.
2. Community Medicine experiences, which offer many opportunities to work with Native Hawaiian patients, begin in Unit 1 and continue throughout the first two years.
3. JABSOM students are offered an elective in Native Hawaiian health in their fourth year.
4. Native Hawaiian traditions are important components of annual JABSOM ceremonies and activities.

Problem-Based Learning and Native Hawaiian Values

Because PBL requires small group interaction and stresses group learning, sharing, problem solving and consensus development, Native Hawaiians are not only well suited, but actually flourish in this environment. Four basic Native Hawaiian cultural values, *aloha, ohana, lokahi and kokua*, have been suggested as instrumental in preparing Native Hawaiians to excel in PBL. These four values encompass the following meanings:

Aloha is the term for love, affection, compassion and kindness for one another (Pukui and Elbert, 1986).
Ohana stresses the importance of the family, extended family or friends who are regarded with affection. Within the ohana, there are feelings of unity, shared love and shared responsibility.
Lokahi emphasizes harmony, unity and the ability to work together to solve problems. It is important to Native Hawaiians to cooperate with others and to be respectful of the natural environment.
Kokua refers to mutual help and cooperation which contributes to group unity by fostering cooperation, interdependence, and reciprocity (Look and Braun, 1995).

Aloha, ohana, lokahi and kokua all place emphasis on the group, not on the individual. Over the six years that JABSOM has utilized a PBL format, Native Hawaiian students have excelled. It seems likely that shared values have contributed to this success.

Native Hawaiian Health Problems and Patients in the PBL Format

The health care problems presented in the first two years of the PBL curriculum provide a representative sample of health issues and problems in the state of Hawaii, including those found in the Native Hawaiian population. Each unit addresses some biological, clinical and behavioral health issues of Native Hawaiians who, unfortunately, have the worst overall health risks in the state of Hawaii and continue to have the highest mortality rates (Look and Braun, 1996, Blaisdell, 1996). Medical students study five units of Health Care Problems in their first two years. All include Native Hawaiian health issues and/or patients.

Following is a listing of Native Hawaiian health issues presented by unit at JABSOM. Note that these health problems are not unique to the Native Hawaiian community, but are prevalent.

In Unit 1, "Health and Illness," seven of nine cases deal specifically with issues related to Native Hawaiian health. These include motor vehicle accidents, alcohol abuse, non-seatbelt use, depression, health problems, poor diet, sedentary life-style, cancer, and pregnancy.

Unit 2, "Cardiovascular, Renal and Respiratory Problems," has a total of 15 cases. Nine offer Native Hawaiian Health issues including heart disease, asthma and emphysema related to smoking, severe hypertension and cancer.

Unit 3, "Hematological, Endocrine and Gastrointestinal Problems," has 15 cases with six Native Hawaiian problems. These cases deal with obesity resulting in gastrointestinal problems and adrenal disease, diabetes, leukemia, and colon cancer.

Unit 4, "Locomotor, Nervous System, Brain and Behavior Problems," has a total of 21 cases, nine dealing with Native Hawaiian health issues including osteoporosis, elder issues, alcohol abuse, osteosarcoma, accidents, stroke, mental health disease including psychosis, bipolar disorder, panic disorder with agoraphobia and rheumatoid arthritis.

Finally, Unit 5, "The Life Cycle," includes 14 cases with 12 Native Hawaiian patients. The health issues include prostate cancer, teenage pregnancy, smoking, asthma, drug use, hypertension, cultural/language barriers, child abuse, leukemia, diabetes and pregnancy, alcohol abuse, bipolar disorder and geriatric issues.

In every unit but Unit Two, there is at least one patient with a recognizable Native Hawaiian name. In many cases, patients are identified in the problem as being Native Hawaiian.

Community Medicine offers Students Opportunities to Work with Native Hawaiian Patients

During their first two years, medical students either rotate through or choose to work at community medicine sites which offer a great proportion of Native Hawaiian Patients.

Community Medicine Sites

Queen Emma Clinic , the provider of health services to medically indigent patients, working poor people, QUEST patients, people referred from the emergency room because they have no physi-

Continued on next page

cian and HIV-infected patients, served 17.9% (1,383) Native Hawaiian patients in 1995. This is also a *Ke Ola O Hawaii* site. Halawa Correctional Facility is the largest state prison in Hawaii, detaining over 1100 sentenced male convicted felons of which 40.9% are Native Hawaiian (Blaisdell, 1996).

Ke Ola O Hawaii Community Medicine Sites

The Waianae Coast Comprehensive Health Center serves patients from the neighborhood community. In 1995, the Center served 8,245 Native Hawaiian patients; 49% of total patients served. Kokua Kalihi Valley Clinic serves medically indigent patients, working poor people and QUEST patients from its neighborhood community. Thirteen percent of the facility's regular users are Native Hawaiian and 94% of first time visitors are of Asian/ Pacific Islander descent.

The Interdisciplinary Training for Health Care in Rural Areas is a community based, collaborative model focusing on interdisciplinary education for health care students. This program provides training for thirty-six students from six disciplines, one of which is medicine. Sites include: Kealakekua, Honokaa and Pahoa on the Big Island; Hana on Maui; Waimea on Kauai; and Kaunakakai on Molokai.

Fourth Year Native Hawaiian Health Elective

Initiated by Dr Kekuni Blaisdell, a Native Hawaiian senior faculty member, this Native Hawaiian Health elective places fourth year students in areas with high concentrations of Native Hawaiians. These sites are located on the islands of Hawaii, Maui and Kauai.

Native Hawaiian Traditions are Incorporated into JABSOM Annual Events

During the first semester, an Open House is held for family, friends and faculty. The Open House is a conscious effort on the part of the JABSOM administration and faculty to develop the concept of *ohana* (discussed earlier) into the medical school's larger family. The annual Winter Memorial Ceremony offers an opportunity for medical students and faculty to give thanks to those who have donated their bodies for Anatomy Laboratory use. Following an ecumenical service, the students take the donors' ashes out to sea in outrigger canoes for burial. Each academic year ends with a luau that the busy first year class presents to the graduating fourth year class. This occasion, held on a country estate on a weekend afternoon, features Native Hawaiian luau food and hula. First year students of diverse ethnicities dance hula to entertain their fourth year guests. The fourth year students reciprocate by thanking their hosts with hula. In addition to the University of Hawaii Commencement Ceremony, JABSOM holds a Convocation each Spring in the Kennedy Theater of the East-West Center. Graduating students have the opportunity to publicly thank the person(s) who have helped and supported them most with a fragrant *maile* leaf *lei*, given only on very special occasions. This is a touching, often tearful, ceremony of thanksgiving.

Conclusion

A function of the faculty in the Native Hawaiian Center of Excellence is to monitor the JABSOM curriculum to assure that Native Hawaiian patients and health problems continue to be well represented. At this juncture, whether it be found in health care problems, in service in the community or in annual events, Native Hawaiian culture is well integrated into the curriculum of the John A. Burns School of Medicine.

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Poem

To my Spouse on Election Day
by Dr Robert S. Flowers

Today is the 5th of November
When millions go to the polls
In trust that the precinct poll tender
Will find us on the "registered" rolls.

For months the campaigning has
bored us
With fake smiles, and rhetoric and lies
From candidates who cajoled and
implored us,
And wooed us with dark shifty eyes.

Some are more honest than others,
But each is a political beast -
Distinguishing themselves
from their brothers
By ethics convoluted and creased.

Some are forthright with good morals
And surely could be a bright star,
Deserving support and our laurels -
But it's difficult to know who they are.

Who should be leading our nation?
And which one should grace
Congress's halls?
Who should we choose this occasion -
A man or a lady with balls?

And who should we let be our mayor?
Or prosecute the criminals and such?
And who should be the school system's
tailor?
And should officials do little or much?

Do we want them speedily making
New laws to rest on our head?
Are they best when they're working
or faking?
"The least governed are the best,"
it's been said.

As I carefully ponder my ballot,
And consider for whom I should vote,
I think of King Arthur and Camelot
And a castle surrounded by moat.

A monarch would be a relief
If intelligent, honest and kind;
But the evil ones cause so much grief
That to choose one you'd have to be blind.

But I usually end up selecting
Some people I really don't want
From that ballot that is long and
perplexing -
A slate I'd be embarrassed to flaunt.

So who should I vote for today
And empower to alter my life
To tax me so I pay and I pay
And disappoint me and fill me with strife.

There is an alternative choice -
Who at politics is just a beginner,
A candidate who makes me rejoice
And am always dead sure is a winner.

That candidate is more than a friend
It's someone I admire and I respect
We communicate even though
I don't send
Any letters to reprove and correct.

So my ballot got punched with a flair
And I left feeling quite satisfied
Albeit I had a strange stare,
I had candidates proven and tried!

Today's the 5th of November
And my candidate hasn't a clue.
I smile as I shyly remember
That I cast all my votes just for you!

Thoughts of Euthanasia

Commentary by Dr Al Morris

Editors Note—

Alfred D. Morris, MD is a retired internist and cardiologist. Al and I worked at the Honolulu Medical Group for many years, but he could not really retire. Al now manages the Hansen's Disease program at Kalaupapa and Hale Mohalu.

In his spare time, he and John Breinich served as coeditors for the November 1995 Special Issue on the History of Medicine in Hawaii, and he continues to help our Journal staff proofreading manuscripts and offering needed advice.

Thanks for your commentary, Al.

Look for the Special Issue on Death with Dignity next month.

Societies and their religions have almost always forbade "murder". However, the definitions of murder usually are less strict the more distance one moves from the gene pool or the more heinous the offense. This obvious protection of the gene pool has survival value for the society or clan. The stratagem of calling the members of the clan "the real people" and the non-members "the other," implying that they are less than human or are devils or defective or are traitors, to escape the proscription of murder is also near universal. This ambiguity has led to very serious problems of ethics and morality, particularly in our enlightened, modern civilization.

In the 1975 movie, the Great Waldo Pepper starring Robert Redford, there is a scene in which Waldo's good friend is trapped in his crashed and overturned airplane. The spectators run out to the scene smoking cigarettes causing a fire. Waldo's friend in panic calls out to Waldo not to let him burn. Knowing the situation is hopeless Waldo picks up a piece of 2 x 4 and smashes his friend's head probably killing him but possibly only producing unconsciousness. Few of us would see this as anything except an act of compassion rather than murder.

Although not completely agreed upon, our society has now generally accepted that withholding extreme medical measures to support the "brain dead" or immediately terminal patient is not murder and is also compassionate, allowing "death with dignity."

Considerably more disagreement meets the acts of a Dr Kevorkian who would assist the passing of a non terminal but severely disabled, suffering person who wishes to commit suicide.

Along this continuum the problem with abortion, so prominent in political discussion, meets with a much greater dissention unless there are some very clear mitigating circumstances. Even then the division in our society is fierce, even "murderous."

Going a bit further we face the dilemma of rationing scarce resources. Water, fuel, air quality, space to live, all pose constraints which some see as requiring population control. At the same time we want to stop killing each other and eliminate diseases which are killing us. Rationing is already upon us and is impossible to avoid. It is an easy step in logic to determine that resources should not be wasted on those of lessor value to society, the aged, the sick, the disabled, etc. Today, very few of us would condone elimination of these individuals. Tomorrow, who knows?

The next step along the incline (the so-called slippery slope) is rationing of children, involuntary birth control, genetic policing and then genetic engineering; all outside our current approval but not entirely clear as to what may or may not be murder.

Finally, at the end of the spectrum, killing for personal reasons, be it robbery, love, elimination of a witness or a competitor, sheer fun or some such thing is surely what the sixth commandment is all about.

What does all this mean? Murder is not a good thing which we are comfortable with. If there are to be exceptions to a blanket "no kill rule" there must be safeguards which are very carefully put in place. Some good people do not believe we are able to control the situation. Other good people believe that we can control ourselves. And some even believe that the lines should not be clearly drawn so that anyone crossing them is not exactly sure if he will be able to do it without danger to his own well being. And therefore such individuals would be extremely cautious and need to have very strong convictions before they would take their chances with euthanasia.



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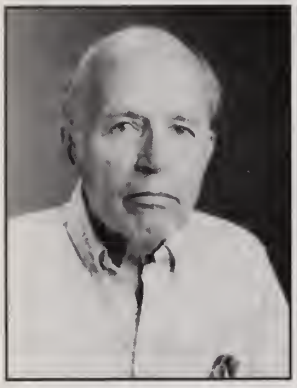
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Hawaii Needs a Policy on Assisted Suicide

by A.A. Smyser

Reprinted from the Star-Bulletin 8/13/96, Hawaii's World



Bud Smyser

About 19 people die in Hawaii every day, 12 or 13 of them from heart disease, cancer or stroke. About three have had hospice help and died fairly comfortably. An equal number or more may have been considerably overtreated—running up their bills and discomfort in combating situations that realistically were hopeless.

If assisted death were legal here, the Netherlands' experience suggests about 200 people out of 7,000 who die every year might receive doctor assistance to abort what looks like a long trip down a tunnel of hopelessness.

These people now have such lonely options as furtively using medications that may fail and leave them further disabled, getting guns, or jumping off high places. But those of us who have taken our pets to a veterinarian to be *put to sleep* know there are quick, compassionate options still denied to humans in the U.S.

Whether the compassionate option will continue to be denied is now being battled out in the legislatures and courts. There is a strong possibility the U.S. Supreme Court will rule on it in its 1996-97 term. Past actions by the court suggest it might declare assisting a suicide a states' rights matter. It thus could uphold Oregon's OK and neighboring Washington's ban.

This would be far narrower than the ruling of two federal appeals courts, one of them covering Hawaii, that there is an inherent right to commit suicide and thus a right to be assisted. The Supreme Court put these rulings in suspension until it decides how to proceed when it reconvenes in October.

Hawaii should be readying its own state policies. I am with a group that hopes a blue-ribbon commission can be formed to propose them.

Community unanimity will be impossible to achieve because there are strong feelings both for and against, as with abortion. However, the odds are the commission could come up with compassionate recommendations that would receive wide public support.

Patient self-determination in the U.S. now is limited to a right to refuse treatment. Living wills are the best way to express it. Do-not-resuscitate bracelets are another.

We still have the problem that too few people have notarized living wills. Beyond that many executed living wills are misplaced or ignored.

A health-care provider can be prosecuted for ignoring a living will but there have not been any prosecutions. One or two might send a wake-up call and help reduce the inhumanity, indignity and expense of over treatment when realistic hope is gone.

Death with dignity is further curtailed even for many hospice patients. Too many are delivered to hospice care only a few days before death, whereas weeks or months are preferable. The longer time means earlier relief from pain and earlier help in minimizing such disquieting symptoms as bowel control.

It also means more time to prepare the dying person and dying person's supporters for the death to come with counseling, practical assistance and emotional support. Many hospice deaths can truly be called beautiful.

Even though hospice care is a *best buy*, fully insured in most cases, there remain a minority of cases patients see as outside a hospice's ability to give enough help.

This is the small gap where doctor-assisted suicide could be humane and less lonely. It is a terribly emotional matter, clouded by *slippery slope* fears of abuse, but still an option that polls show most Americans and many doctors favor.

Whether assisting a suicide becomes a state's rights question or a general right, Hawaii ought to be thinking out what state public policy should be. Our present law makes it the crime of manslaughter to *cause* a suicide. Whether that is distinct from *assisting* a suicide has never been tested in court but it leaves physicians uneasy.

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Multidisciplinary Evaluation of Preschool Children in a Military Psychiatry Clinic: A 10-Year Comparison and a Brief Outcome Study

Bernard J. Lee, MD, COL, MC

A little over a decade ago, the Child and Adolescent Psychiatry Service at Tripler Army Medical Center opened the Child Study Group (CSG), a multidisciplinary diagnostic team clinic for preschool children. The methods and results of the clinic were reported previously (Lee, 1987). The current study is a comparison of the cohort of children seen from January through December 1984 with the parallel group seen from January through June 1994. The paper also presents a brief follow-up study of the children seen in 1994.

Child Study Group

The Child Study Group evaluates all children, ages 5 and under, who are referred to the Child Psychiatry Service. This clinic is free to all eligible dependents of active duty and retired military personnel living in Hawaii. The clinic is scheduled weekly, three mornings every month. The evaluation team consists of a child psychiatrist, a developmental pediatrician, a speech pathologist, an occupational therapist and a social worker. A first-year child psychiatry fellow is assigned to the clinic for a 6-month period. A PGY III psychiatric resident also participates. The children are divided into two groups, those aged 4 and 5, and those who are 3 and younger; in general, there are six to seven children in each group. Once referred, a child is assigned to either a child psychiatrist, a child psychiatry fellow, or a PGY III resident working under staff supervision. In each instance, the assigned professional becomes the primary physician responsible for parent interview, chart-keeping, and follow-up.

The evaluation process then begins with a history taking interview involving one or both parents. After the initial interview, the child is scheduled for the appropriate age group, while the parents meet in a group setting with a social worker to discuss child rearing practices and problems. Before the first CSG meeting, the team meets briefly to discuss the cases scheduled for that morning.

In actual process, evaluation begins in the waiting room where observation are made of the child-parent interaction and separation process. Once the children are introduced to each other and to the staff, we observe how they cope with strange situations and mingle with each other. The children start to play or draw pictures. The team members intermingle and start formal evaluation of the children. The developmental pediatrician tests the children and screens them to determine the need for further evaluation. The occupational therapist tests gross and fine motor coordination using parts of the Denver Developmental Screening Test, Erhardt Test for Prehension Skill, Peabody Motor Development Test, and the Child Observation by Jean Ayres. The speech pathologist listens to the children and, where appropriate, evaluates the child for speech problems using the Peabody Picture Vocabulary Test - Revised, Goldman - Fristol Test for Articulation, and Clinical Evaluation of Language Fundamentals - Preschool (CELF-P). The child psychiatrist, the child psychiatry fellow, and the PGY III resident observe and participate in the children's activities. The social worker conducts the parents group in another room during the time the children are being evaluated in the playroom. In this way all team members assume the roles of observer, participant, evaluator, and therapist.

Through these sessions, we familiarize ourselves with every child in the group in the areas of motor development, language development, adaptive and cognitive development, social behavior, and the emotional aspect of personality development. After each session team members gather to synthesize and to integrate the information each has gathered. At the end of the third session, each child is discussed by the team members; the goal is to formulate diagnoses according to DSM III-R and to offer recommendations, depending upon the needs of each child. Parents are usually seen a week later for a feedback session, at which time the results of the CSG evaluation are shared with them.

The present study compares the children seen at the clinic from January to December of 1984 with the children seen from January to June 1994. In addition the paper will present the result of a brief follow-up of the children seen during the first five months of 1994.

Reprint request to the Author:

Bernard J. Lee, MD, COL, M.C.
Chief, Child and Adolescent Psychiatry Service
Tripler Army Medical Center, Honolulu, Hawaii
96859-5000
Tel (808) 433-6418
Fax (808) 433-4591

Clinical Professor
John A. Burns School of Medicine
University of Hawaii, Honolulu, Hawaii

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Population and Clinic Demography

The Tripler Child and Adolescent Psychiatry Service is located in Honolulu, Hawaii, and is responsible for the psychiatric care of all military dependents in Hawaii under age 18. The total population of active duty dependents under age 18 is 43,936; 22,435 are males and 21,501 are females. The several branches of the service are represented in the following manner: Army 37%, Navy 36%, Air Force 11%, Marine Corps 14%, and Coast Guard 2%. Officer's children represent about 20% and the children of the enlisted personnel some 80%. (Defense Medical Information System, 1994).

The total number of preschool children referred to the CSG clinic from January through December 1984 was 129; this represented 20% of the all child psychiatric referrals, (641 patients). From January through June 1994, 84 preschool children were referred to the CSG; they comprised some 35% of the all patients evaluated at the clinic during that time (246 patients).

Data Collection

Data for the previous and the current studies were obtained from an Intake form filled out by the parents before the initial interview and from the psychiatric evaluation note in the clinic chart.

The variables selected for these studies included age; sex; sponsor's branch of service and rank; whether the child lives with natural parents, step-parents or other; presenting problems; diagnoses; and recommendations.

Results

Age and Sex

Of the total psychiatric population during the year 1984, 20% were preschool children. Among the pre-school referrals, 60% were boys and 40% were girls (1.5:1 ratio). The age and sex distribution of the preschool children seen in the 1994 CSG is shown in Table 1. The boys represented 66% of the clinic sample and girls 34% (2:1 ratio). The age distribution was fairly similar to the previous study; about 45% of the children were two and three years old and 55% were four and five years old.

Rank and Branch of Services of the Sponsor

In the 1984 clinic sample, the referrals by branch of service were Army 51%, Navy 29%, Air Force 14%, Marine Corps 5% and Coast Guard 2%. The distribution in 1994 was; Army 50%, Navy 34%, Air Force 8%, Marine Corps 5% and Coast Guard 3%.

Eighty-eight percent of the population evaluated in 1984 CSG were children of enlisted parents, and 12% were children of officers. This is very similar to the 1994 CSG population (enlisted 89%, officers 11%). The distribution of rank during the year 1984 and 1994 was Specialist 4 and below (20%, 29%), Sergeant and Staff Sergeant (68%, 53%), Sergeant First Class and above (6%, 7%) and Officers (12%, 11%).

Status of Parents

Among the many variables of family constellation, only one was evaluated in the study; whether the referred child was living with natural parents, stepparents, or other. Seventy-five percent of the children were living with their natural mother and father in both 1984 and 1994 study. There was a slight increase in stepparents from 12% to 18% in 1994. In the 1984 CSG, 10% of children were living with a single, enlisted, active-duty mother. In 1994, 10% of children were living with single active duty parents (5 with an active duty mother and 3 with an active duty father).

Table 1.—Age and Sex Distribution of 1994 CSG Population

Age	Male	Female	Total
2	4	4	38 (45%)
3	20	10	
4	15	6	46 (55%)
5	17	8	
Total	56 (66%)	28 (34%)	84 (100%)

Table 2.—Frequency of Presenting Symptoms Reported by Parents

	Patients/1984 (N=120)	Patients/1994 (N=77)
Difficult to Control/ Oppositional	74 (57%)	59 (77%)
Overactive/hyperactive	25 (20%)	47 (61%)
Aggressive/Destructive/Temper tantrum	54 (42%)	43 (56%)
Delayed Speech Development/Not talking	28 (22%)	36 (47%)
Sad/Unhappy/Anxious/Withdrawn	35 (27%)	31 (40%)
Enuresis	13 (17%)	20 (25%)
Poor Relationship with Peer/Sibling	10 (8%)	19 (25%)
Sleeping Problems	9 (7%)	14 (18%)
Eating Problems	5 (4%)	11 (14%)
Encopresis	6 (5%)	10 (13%)
Lying	4 (3%)	12 (17%)
Cruel to Animals	2 (1.5%)	10 (14%)
Somatic complaints	2 (1.5%)	6 (8%)
Stealing	2 (1.5%)	3 (4%)
Sexual Play	3 (2%)	6 (8%)
Pulling Hair	4 (3%)	0
Running Away	0	2 (2.5%)
Not Talking outside of home	0	1
Fire Setting	0	1

Presenting Problems

Presenting problems in order of frequency in both years are shown in Table 2. In both 1984 and 1994, the cluster of symptoms most frequently reported by the parents concerned behavior problems. However, in 1994 there were a higher percentage of parents complaining of symptoms of disruptive behavior and delayed speech development than in 1984. Also parents had more complaints about their children in 1994 (331 symptoms for 77 children) then in 1984 (276 symptoms for 120 children).

Diagnosis

The different diagnostic categories rendered at the end of the third CSG session in both years are summarized in Table 3. In contrast to the previous study, where the Adjustment Disorder was most frequently diagnosed, in 1994 more children were diagnosed as having Disruptive Behavior Disorder. This category included At-


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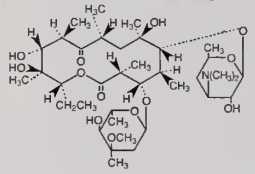
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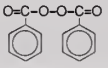
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Benzoyl peroxide ($C_{14}H_{10}D_4$) is an antibacterial and keratolytic agent. The structural formula is:



Clinical Pharmacology: Erythromycin is a bacteriostatic macrolide antibiotic, but may be bactericidal in high concentrations. Although the mechanism by which erythromycin acts in reducing inflammatory lesions of acne vulgaris is unknown, it is presumably due to its antibiotic action. Antagonism has been demonstrated between clindamycin and erythromycin.

Benzoyl peroxide is an antibacterial agent which has been shown to be effective against *Propionibacterium acnes*, an anaerobe found in sebaceous follicles and comedones. The antibacterial action of benzoyl peroxide is believed to be due to the release of active oxygen. Benzoyl peroxide has a keratolytic and desquamative effect which may also contribute to its efficacy.

Benzoyl peroxide has been shown to be absorbed by the skin where it is converted to benzoic acid.

Indications and Usage: Benzamycin Topical Gel is indicated for the topical control of acne vulgaris.

Contraindications: Benzamycin Topical Gel is contraindicated in those patients with a history of hypersensitivity to erythromycin, benzoyl peroxide or any of the other listed ingredients.

Precautions: General—For external use only. Not for ophthalmic use. Avoid contact with eyes and mucous membranes. Concomitant topical acne therapy should be used with caution because a possible cumulative irritancy effect may occur, especially with peeling, desquamating or abrasive agents. If severe irritation develops, discontinue use and institute appropriate therapy.

The use of antibiotic agents may be associated with the overgrowth of antibiotic-resistant organisms. If this occurs, administration of this drug should be discontinued and appropriate measures taken.

Information for Patients—Patients using Benzamycin Topical Gel should receive the following information and instructions:

1. Benzamycin Topical Gel is for external use only. Avoid contact with the eyes and mucous membranes.
2. Patient should not use any other topical acne preparation unless otherwise directed by physician.
3. Benzamycin Topical Gel may bleach hair or colored fabric.
4. If excessive irritation or dryness should occur, patient should discontinue medication and consult physician.
5. Discard product after 3 months and obtain fresh material.

Carcinogenesis, Mutagenesis and Impairment of Fertility: Long-term studies in animals have not been performed to evaluate carcinogenic potential or the effect on fertility.

Pregnancy Category C: Animal reproduction studies have not been conducted with Benzamycin® Topical Gel. It is also not known whether Benzamycin Topical Gel can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Benzamycin Topical Gel should be given to a pregnant woman only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Benzamycin Topical Gel is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children below the age of 12 have not been established.

Adverse Reactions: Adverse reactions which may occur include dryness, erythema and pruritus. Of a total of 153 patients treated with Benzamycin Topical Gel during clinical trials, 4 patients experienced adverse reactions, of whom three experienced dryness and one an urticarial reaction which responded well to symptomatic treatment.

Dosage and Administration: Benzamycin Topical Gel should be applied twice daily, morning and evening, or as directed by physician, to affected areas after the skin is thoroughly washed, rinsed with warm water and gently patted dry.

How Supplied and Compounding Directions:

Size (Net Weight)	NDC 0066-	Benzoyl Peroxide Gel	Active Erythromycin Powder (In Plastic Vial)	Ethyl Alcohol (70%) To Be Added
23.3 grams (as dispensed)	0510-23	20 grams	0.8 grams	3 mL
46.6 grams (as dispensed)	0510-46	40 grams	1.6 grams	6 mL

Prior to dispensing, tap vial until all powder flows freely. Add the indicated amount of ethyl alcohol (70%) to vial (to the mark) and immediately shake to completely dissolve erythromycin. Add this solution to gel and stir until homogeneous in appearance (1 to 1½ minutes). Benzamycin Topical Gel should then be stored under refrigeration. Do not freeze. Place a 3-month expiration date on the label.

NOTE: *Prior* to reconstitution, store at room temperature. *After* reconstitution, store under refrigeration. Do not freeze. Keep tightly closed. Keep out of the reach of children.

Caution: Federal (U.S.A.) law prohibits dispensing without prescription.

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tention Deficit Hyperactivity Disorder (21 boys, 4 girls), Oppositional Defiant Disorder (2 boys, 4 girls), and Conduct Disorder (1 boy, 0 girl). The frequency and sex ratio of both Enuresis and Encopresis remained similar during both eras. The diagnosis Parent-Child Problem was reserved for cases in which the child was free of psychiatric problems, but the parents had parenting difficulties, including child abuse and neglect. About 10% of children had this diagnoses in both study periods. Other diagnoses included Dysthymia (1 boy), Separation Anxiety Disorder (3 boys, 1 girl), Sleep Terror Disorder (1 boy, 1 girl), Elective

Table 3.—Summary of Diagnosis

	1984 (N=129)	1984 (N=77)
Adjustment Disorder	25% 18 boys, 14 girls	17% 8 boys, 5 girls
Disruptive Behavior Disorders	20%	40%
Attention Deficit Hyperactivity Disorder	12 boys	21 boys, 4 girls
Oppositional Defiant Disorder	5 boys, 5 girls	2 boys, 4 girls
Conduct Disorder	4 boys	1 boy
Disorder of Elimination	15%	12%
Enuresis	6 boys, 6 girls	3 boys, 2 girls
Encopresis	5 boys, 1 girl	3 boys, 1 girl
Parent Child Problems	10%	10%
Others	16%	15%
Separation Anxiety Disorder	1 boy, 1 girl	3 boys, 1 girl
Dysthymia	2 boys, 1 girl	1 boy
Sleep Terror Disorder	3 boys, 1 girl	1 boy, 1 girl
Trichotillomania	3 boys, 2 girls	
Elective Mutism		1 girl
Tourette's Disorder		1 boy
Developmental Disorders	18% 13 boys, 7 girls	36% 20 boys, 8 girls
Global Developmental Delay	13%	6%
Pervasive Developmental Disorder	10% 4 boys, 7 girls	9% 5 boys, 2 girls

Table 4.—Recommendation Following the CSG

	In 1984 (N=124)	In 1994 (N=77)
Parent Counseling	50%	60%
Psychopharmacotherapy	10%	25%
Individual Psychotherapy	20%	16%
Group Therapy	15%	10%
Referral to DOE	20%	26%
Referral of the Parent for His/Her own Therapy		7%

Mutism (1 girl), and Tourette's Disorder (1 boy).

About 50% of the children of the 1994 CSG had developmental disorders and received an AXIS II Diagnosis compared to 40% in the 1984 study. The incidence of developmental disorder in 1994 was: Developmental Language Disorder (14 boys, 5 girls), Developmental Articulation Disorder (4 boys, 2 girls), and Developmental Coordination Disorder (2 boys, 1 girl). Global developmental disorder was diagnosed when there were delays in more than one area of development. Mental retardation was also included in this group. In the 1984 CSG, two unexpected findings were the large number of children with pervasive developmental disorder (4 boys, 7 girls) and the prevalence of girls with this disorder. The 1994 CSG also had a large number of children with Pervasive Developmental Disorder (5 boys, 2 girls), with the boys outnumbering the girls.

Recommendations

Table 4 shows the recommendations following the CSG in the two different years. In comparing the groups, a larger number of children were treated with psychopharmacotherapy in 1994. Eighteen children were given Ritalin (eight 3 year old boys, one 3 year old girl; five 4 year old boys, one four year old girl; three 5 year old boys). In addition to Ritalin, one 3 year old boy and two 4 year old boys were given Clonidine. One child with Autistic Disorder was given Haldol. In both years, about 25% of children were referred to the Department of Education for further evaluation and proper class placement.

Table 5.—Presenting Problems at the Time of Evaluation Reported by the Parent at 3 Months Follow-up

		% (N=52)
Difficult to manage/control	12	23%
Hyperactive/Short attention Span	12	23%
Possible ADHD	10	19%
Delayed Speech Development	10	19%
Problem at School/Daycare	4	8%
Poor Relationship with Peers/Sibs	3	6%
Sleep Problems	2	4%
Sexual Molestation	2	4%
Multiple Fears	1	
Wetting Pants	1	
Not Talking in School	1	
Fire Setting	1	
Parents Getting Divorce	1	
Cruelty to Animals	1	
Adjustment to move to Hawaii	1	

Table 6.—Parent's Perception of the Diagnoses at the End of the CSG Compared to the CSG Diagnosis Percentages (N=52)

	Parents Report	The CSG DX
ADHD	18 (34%)	32%
No Diagnosis	13 (25%)	
Developmental Delay	10 (20%)	34%
Adjustment Disorder	5 (10%)	18%
Autistic/PDD	4 (7%)	9%
ODD	2 (4%)	8%
Separation Anxiety Disorder	1	5%
Elective Mutism	1	
Did not finish CSG	4 (7%)	

Brief Follow-up Study

At three months following the completion of the CSG evaluation, the parents of the children evaluated from January to May 1994 CSG were contacted by the clinic Noncommissioned Officers In Charge (NCOIC). The contact was made by phone using a questionnaire.

Questionnaires

1. Presenting problems at the time of evaluation.
2. Parent's perception of the diagnosis at the end of evaluation.
3. Recommendations for the child and/or family after the evaluation.
4. How is the child doing at the present time?
 Improved____, no change ____, or worse ____.
5. Was the CSG helpful?
6. In what way?

Results

Of 64 children evaluated during the 5 months periods in 1994, the clinic NCOIC was able to locate 52 parents (80%). Table 5 listed parent's reports of presenting problems at the time of evaluation. About 65% of parents reported symptoms for disruptive behavior disorders (difficult to manage, hyperactive, and possible ADHD). Only 20% of the parents reported delayed speech development. About 8% of parents reported problems at school/day care as the reason for evaluation. The school problem was not listed in the referral presenting problem as it is not included in the Intake Form check list of problems.

Parent's perception of the diagnoses at the end of evaluation are summarized in Table 6. The only diagnosis in which the parent's perception coincide with CSG evaluation was Attention Deficit Hyperactivity Disorder. Other diagnoses including Adjustment Disorder, Developmental Disorder, and Pervasive Developmental Disorder were under-reported when compared to the diagnosis provided at the end of the CSG. Twelve parents (25%) reported that their children did not receive any diagnosis. Of these twelve, 3 had been classified as Adjustment Disorder and 3 did not finish the CSG. Two were referred to the DOE, one with diagnosis of Developmental Language Disorder and the other with Pervasive Developmental Disorder. Two children had parent -child problems with possible abuse. One had provisional Diagnosis of ADHD. Only one child received no diagnosis on both AXIS I and II.

Parent's Report of Recommendation

Thirteen parents (25%) reported that their children were referred

Table 7.—Parents Report of the Recommendation at the End of the CSG Percentage (N=52)

Recommendations	
Medication	13 (25%)
Referred to Special Education Program	13 (25%)
Follow-up at the Clinic	12 (23%)
No needs of Psychiatric follow-up	8 (15%)
No Recommendation	4 (8%)
Referred out (CHAMPUS)	2 (4%)

to the Department of Education for special class placement (Table 7). Another 25% of parents reported that their children were recommended for medication. These figures roughly coincide with the CSG recommendations. Eight parents (15%) felt that their children did not need psychiatric follow-up, and 4 parents (8%) said that they were not told of any recommendation.

Condition of the Child at the Time of Follow-up

For the condition of the child at the time of follow-up, 41 parents (80%) reported improvement, 10 no change, and 1 worsening of the child's behavior or condition. Almost the same number of parents (42) reported the CSG was helpful. Four parents were not sure. Six parents reported that the CSG was not helpful for the following reasons: "Child was misdiagnosed," "Group was too large," "Just wanted medication for the child," and "I did not learn anything which I did not know."

The following answers are the responses of the parents to the questions of "In what way the CSG was helpful?"

No comments from the parents	14 (27%)
Helped them to get into the system (F/U at the clinic, referral to DOE, etc.)	10 (20%)
It was a good evaluation	8 (15%)
Parent group was helpful	7 (14%)
Medication following the evaluation	6 (12%)
Helped the mother understand the problem	5 (10%)
Helped to get his feelings out	1
Gave him an outlet to talk	1
Has made positive change in child	1
Helped to resolve anger and fighting with his brother	1

Discussion

The first 5 years of life are universally accepted to be of profound importance for human emotional development. The paper presents the psychiatric evaluation, demography, and a brief outcome study of preschool children in a military psychiatric clinic. These findings are especially interesting given the similar methodology used in the clinic both 10 years ago, and in the current study.

The present study , when compared to the previous one, showed several clinically relevant findings. The clinic population of the preschool children increased from 20% to 35% in 10 years. Ten years ago, 10% of children evaluated were living with single active duty mother. In the 1994 CSG, about 10% of preschool children were living with single parents; 5 with single active duty mothers and 3 with single active duty fathers. Both in 1984 and 1994 the problem most frequently presented was difficulty in managing the child . However, the 1994 CSG had a greater percentage of children with Disruptive Behavior Disorders than did the 1984 sample (40% vs. 20%). In 1994 CSG, 25 children (32%) had ADHD, and the majority of these children were treated with medication. In 1994 almost 25% of preschool children received a recommendation for psychopharmacotherapy. Some questions are raised by these findings. Did the differences in criteria between DSM III and DSM III-R influence the higher number of ADHD children in the 1994 clinic population, or are we seeing more children with severe behavior problems? In fact, it is our feeling that we are seeing more difficult children than in previous years. There is a recent survey of children's problems which was based on parents' reports for 7 to 16 years old and extended over a 13-year period. The authors reported increased problems and concluded that the American children's problems are getting worse. (Achenbach T.M. & Howell C.T, 1993). It is our impression that our findings of increased behavior problems in preschool children reflect earlier onset and continuity of these difficulties. We would suggest that there may be a change in how we are rearing children. Was our staff more at ease in prescribing medication to the ADHD preschool child than in the previous study year? Why does our clinic continue to find a large number of preschool children with Pervasive Developmental Disorder? The numbers remained constant through the years (About 10% of the CSG population).

The long term follow-up study of military dependents is a rather difficult task. The military family is mobile. The average length of stay for such a family in Hawaii is three years. We were able to contact 80% of the 1994 CSG three months following the completion of evaluation. Compared to the large number of children (50%) who received AXIS II diagnosis (Developmental Language Disorder, Developmental Delay and Pervasive Developmental Disorder), only 27% of parents reported Developmental Disorder at the follow-up. One surprise finding was about 25% for parents reported that their children did not receive any diagnosis. This raises the question of whether we were effective in conveying our findings to the parents. At the three months follow-up, 80% of parents reported that the CSG evaluation and recommendations were helpful, and that their children's condition improved following the CSG evaluation.

In our clinical experience over ten years, evaluating preschool children in a CSG setting was very efficient and time-saving. Developmental, occupational and speech evaluation were all important parts of psychiatric evaluation of preschool children. Almost 50% of the children evaluated had developmental disorders. We feel that the CSG is very cost-effective as an evaluation and intervention methods. The CSG not only offered a comprehensive evaluation for a child but also had a therapeutic effect on both children and their families.

Summary

A useful model for evaluation of preschool children has been presented together with the findings of a brief demographic and outcome study of a group of such children seen at a military child psychiatric clinic during a decade. Early childhood intervention is a young but rapidly growing field. With the passage of the Education of the Handicapped Act Amendment of 1986 (Public Law 99-457), diagnosis and intervention for developmental delay, disability, and/or emotional and behavior problems of infants and toddlers have become a more important aspect of training in the child and adolescent psychiatry residency program. We found that evaluating preschool children and their parents in a group setting was not only possible, economical and effective, but also an excellent vehicle for training.

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Summer Camp in Croatia

Joyce L. Hunt MD
October 17, 1995

Editor's Comments—

Joyce L. Hunt, MD served her residency in Obstetrics and Gynecology at the John A. Burns School of Medicine - University of Hawaii. She is presently working with Ohana Physicians Group in Windward Oahu.

She received additional surgical training in Advanced Laparoscopy, Electrosurgery, Rectoscope and Hysteroscopy, Laser Surgery, and did a clerkship in Endocrinology at the National Institutes of Health.

But more than being a well-trained and now experienced physician, Dr Hunt became involved with several interesting humanitarian projects. She was part of the Aloha Medical Mission team that went to Hue, Vietnam in November 1995. She has also worked in Calcutta, the Philippines and Kenya.

Recently she completed an extensive course, H.E.L.P. - Management of Health Emergencies in Large Populations sponsored by our medical school, the Johns Hopkins School of Public Health, and the International Red Cross.

This essay and the accompanying photographs describe her experiences as camp physician and volunteer for the Island to Island Summer Camp in Jelsa, Croatia. "My experiences have contributed to my love for mankind and my commitment to medicine in Hawaii."

Thank you Dr Hunt, for sharing your aloha for the children of Croatia with us.



Dr Joyce L. Hunt "Island to Island Summer Camp." Physician awaiting ferry to cross Adratic Sea. Stari Grad, Havar, Croatia. August 1995. Photo by Alysse Minkoff.

Last year I traveled from Honolulu to the island of Havar in Croatia to be a volunteer physician at a summer camp for refugee children. Havar was a wonderful island in the Adriatic Sea to have a camp. Lavender, anise, sage, and other herbs were abundant. The children could pluck and eat the blackberries and grapes which grew along the roadside. Our daily walks along the pebbled beach and to the Roman ruins allowed the children a time to open up. Darko, a 13 year old boy from Mostar, Bosnia Herzegovenia, remarked how pleasant it was just to be able to stroll along the road and not be a target. His 9 year old brother, Dario, had been grazed by sniper fire earlier this year on his way to school. "That is the price we pay for life," Darko explained. He had become used to living with daily fears of death and dying. If he knew that the War would be over in a few months, he might not venture out in the streets to go to school, but since the War would continue indefinitely, he felt that he must be educated and, therefore, was willing to take the risk that he might die while walking to school.

Branka, a Bosnian volunteer, brought 25 children from Mostar to the camp. In February she had been reunited with her 6 year old daughter, Erta, after a long 3 year separation filled with heartache and strife. During the bombing of Mostar in 1992, Branka and her husband decided it would be safer if their 3 year old daughter fled the city with his parents. Branka and her husband stayed behind as they did not think the shelling and bombing would last long. They both had good jobs and a nice apartment and did not want to lose them. A grenade put an end to their dreams. Branka's husband was found dead on the street. Six months later she located her daughter and husband's family, who had become refugees in another part of Bosnia. Ena stayed with her grandparents for two more years until Branka felt that she could cope and adequately support her. The camp offered a bonding and healing time for them.

I first learned about the children's summer camp in April when I ran into an old acquaintance in the bank. Judith Jenya, the founder and director of the Global Children's Organization, was preparing for the 3rd annual summer camp in Croatia for orphans and refugee children from war-torn Croatia and Bosnia-Herzegovenia. I was fascinated and intrigued. We went for coffee, and Judith briefed me on the history of the organization, gave me a quick overview of the changing geography of the Balkans, and provided a synopsis of the War and its impact during the last 3 years.

In 1992, Judith had been traveling in the Balkans searching for her "roots" when she witnessed the stresses of war that children were enduring. Many of them had seen their homes destroyed, mothers raped, and friends or family killed. Feeling a need to help and possibly make a difference in the lives of these children, Judith set out to create a summer camp which might give them a temporary respite from the war, restore hope, and let them be children again. She got the idea for a summer camp from a Croatian psychologist working at an orphanage in Split. The first summer camp was held in August 1993, on the island of Badija at a Franciscan Monastery, bringing together 80 children ages 7 through 14 and volunteers from the United States, Europe, Croatia, and Bosnia-Herzegovenia.

Last year, Camp Sutej was held at Hotel Jelsa on Havar off the Dalmatian Coast. This resort island with its medieval towns seemed to be a safe location for the camp because the ferries were easily accessible and could be taken directly to Italy, if necessary, and the western part of Croatia had not been involved in fighting since 1991. That is, until 2 days prior to my departure. In a lightning offensive, the Croatian army attacked the Krajina region, the Serb stronghold in western Croatia, causing hundreds of thousands of Serbians to flee into Bosnia. Knowing of the recent history and atrocities in this War made me fearful. I could not understand how anyone could be going on holiday within Croatia, or allow their children to go to a summer camp for that matter, especially since the Croatian troops had just been called up and the fighting was in the general vicinity.

My husband took a deep breath and gave me his *aloha* as he put me on the plane to Milano, and promised not to mention my plans to anyone, especially my mother.

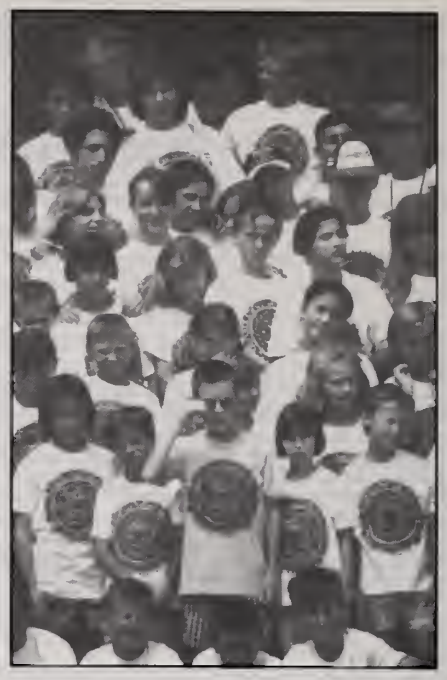
I met other camp volunteers enroute - artists, musicians, counselors, writers, a filmmaker and another physician, a psychiatric resident from Venice. We were elated to finally see Judith Jenya when she boarded our ferry in Split. We were able to release some of the tension that had built up during our journey. We had witnessed



Croatian refugee woman in Babushka. Jelsa, Havar, Croatia. August 1995. Photo by Dr Joyce Hunt.



"Peace" Engraved on church door. Jelsa, Havar, Croatia. August 1995. Photo by Dr Joyce Hunt.



Island to island Summer Camp. Badjia, Croatia 1994. Photo by Judith Jenya.

UN trucks disembarking our ferry, wondering what they were transporting, and we had nervously passed border patrols while trying to "keep cool" or "chill out" as my kids would say. It was hard to comprehend the full effect of the war on the lives of this homogeneous appearing population.

Hotel Jelsa was originally built as a camp for Serb children but now housed 50 refugees permanently. Although it needed repair it was spacious, with breathtaking views from every angle. Rocky barren slopes erupted into green pine forests. Vineyards reflected in the clear Adriatic. The surrounding beauty overwhelmed us daily.

Upon our arrival we were introduced to some of the Junior camp counselors who were also refugees. This was our first exposure to the effect of the War on teenagers and young adults. Our purpose at the camp was to create memories and provide an outlet for the children to have fun so they could temporarily put aside their traumatized lives. It was important that we did not probe into their personal lives but let them open up to us if they chose to do so.

Jadranko and Dusko, strikingly handsome brothers whose family had resided at the refugee camp for over 2 years, had the first dramatic story that we encountered. Shortly after the onset of the War, their village, near Travnik in central Bosnia, had been bombed and raided by Muslim soldiers. The family fled but Jadranko, then an aspiring 18 year old gymnast, and his two older brothers were captured and taken prisoners to Manjaca where they experienced and witnessed the horrors of a concentration camp. Throats were slit. Mutilations, rapes, and killings were all performed in the name of ethnic cleansing and revenge. These young men were the victims of something they did not understand and may never understand. They survived the torture but were scarred for life. They were ultimately traded for other prisoners and released. Jadranko then joined the local army, initially fighting in the hills in an attempt to preserve his town and then throughout Bosnia for the next 2 years. He did not know the whereabouts of his family for at least 6 months until the Red Cross finally located them in Croatia. Although his dreams of competing as a national gymnast were shattered, he was thankful to be alive and once again be reunited with his family in Jelsa.

Dusko, the youngest brother, had escaped with his family but suffered the stigma of being a refugee. He was allowed to enroll in the local high school but had only one friend. Although a Croat, he was a refugee who had no money and therefore, he was looked down upon by the local teenagers.

Jadranko joined the camp as a volunteer with some hesitation. He knew his fluency in English would be very valuable as well as his athletic ability, but, as he confided in me, the trauma he had experienced would make it difficult for him to get close to the children. Vivid flashbacks were still present, occurring nightly.

After our brief recovery and our first of many cold showers, we held an organizational meeting. The schedule of daily activities we created included swimming, hiking, active outdoor games and sports, arts and crafts, drama, music, and the highlight of the day - evening disco. The Italian psychiatrist Dr Paniccia and I combined our efforts and organized our temporary infirmaries (our rooms), pooled our medications, and set forth our plan of action for diagnosing and treating our potential patients. Language barriers would not be a problem since half of the children could speak English and a few could speak Italian or German. The handout of Croatian-Serb words and phrases was all that was necessary to get through the day.

The children arrived the following afternoon. They beamed with unforgettable smiles. They were well dressed; their clothes were not tattered and torn, as one might expect from the connotation of the word refugee, but stylish with the names of American sportswear and heroes on almost every article of clothing. They were not maimed or obviously crippled but appeared well nourished, healthy and very attractive. The orphans from Spilt were a special group. They could not speak English so they communicated with their faces. Their smiles seldom vanished. Their eyes spoke words. They adjusted easily to the daily routine and loved to be hugged. I slowly discovered how well all of the children had buried the trauma that they had endured over the previous 3 years. Their faces did not reveal their pain. But the stories of their lives slowly unfolded as they felt comfortable with their surroundings and the volunteers.

Swimming and activity time brought everyone close together. This was a time for getting to know one another and sharing. "I am

numb," 11 year old Borsko murmured to Tom, one of the volunteers, as he was looking at the map pointing to the town where he used to live. "I can't think of these things, that is why I come to camp," he continued softly. Borsko had buried the memories of his best friend's tragic death. He had been blown up by a grenade while they were playing together.

Dado, a 10 year old bully, softened with time. He was the leader of a small group of boys and made all of the decisions for them. This was often very frustrating for everyone. When he took my hand one evening on the way to the disco, I knew that he had taken giant steps.

The evening disco allowed the children to be free and to unwind. They loved it. There was a theme and program every night. The shell leis I brought from Hawai'i were a hit. New friendships developed and would continue after the camp was over. After 2 weeks we had memorized the Croatian words to the pop songs that echoed under the moonlight. The children fell asleep exhausted.

Most of my advice as one of the two camp physicians was based on my experiences as a mother of three athletic children rather than as an obstetrician gynecologist. Initially we were so busy treating minor ailments that we had to remind the group leaders how to parent and when a physician was really necessary. We passed out Band-Aids and reviewed their placebo effect. I also had to demonstrate to my compassionate Italian psychiatrist partner how to give liquid Tylenol with a dropper. Tonsillitis, balantitis, and a moderate reaction to a bee sting which required the use of the emergency epinephrine kit were among the significant medical problems that we encountered.

Our first major medical challenge was Marina whose headache had persisted all morning on the day she was to be interviewed for a documentary. At 12-1/2 years old she was our youngest but very mature junior volunteer. Her father was still one of those listed as missing in action. The Red Cross and other organizations seemed to be doing a relatively good job of keeping track of soldiers, families and refugees, but the whereabouts of her father had not been known since 1993 and many presumed him dead or a prisoner. Marina would never give up hope. This was her third summer camp. She had been interviewed previously and was known by all of us from the original video of the Global Children's Organization. She was excited that she would be interviewed again but her headache worsened and now was accompanied by vomiting and fever. With the nature and progression of her symptoms a diagnosis of viral flu syndrome was made. We were summoned every 10 minutes with an update on her condition. It was upsetting to see Marina so sick, the staff was impatient and wanted her better and many suggested we give her some sort of medication to make her well. Again we insisted that they monitor her condition, keep her comfortable, let her sleep, and most of all be patient. She was so loved by everyone at the Camp that it was hard to just sit back and watch. Two days later she was able to join us for lunch and her beautiful smile reappeared.

The 2 weeks of camp flew by. We all knew parting would be difficult. Crying was a common occurrence but also felt good. How many of the boys in my group would reach manhood, I wondered? We all gained from this experience. Jadranko appeared to gain the most as his tense muscles relaxed while he held the young orphans in his arms. His flashbacks had diminished.

Melita, another junior volunteer, joined us on the bus back to the ferry. She would leave us in Split and head for Zagreb to visit her father who had been recently drafted again into the Croatian army during the first week of camp. Men were eligible for the draft until the age of 60 and he was 45 years old. Faces were wet with tears as we said our good-byes in Split to Melita, other volunteers, and the children. The future was unknown for these beautiful human beings, but the memories we created would be with all of us forever.

Dr Paniccia and I escorted Dajan, Nina and four other children home and were the guests of their families in a refugee camp on the outskirts of Split. The "camp" was actually a group of wooden buildings which appeared as though they had been previously used as a motel or vacation spot on the Adriatic Sea. Nina's family of four shared one room and her cousin's family of five was lucky to have two rooms with three teenagers in one room and their parents in a partitioned-off communal kitchen to create some privacy for their bed. A common bathroom was outside, up two flights of stairs, and shared by 30 people. Two years earlier this had been temporary housing for Dajan's family after they fled Bugojno in Bosnia.

These refugees realized they were fortunate to be alive. Although they were Croatian, they were still outsiders and not accepted by the local community. The children were teased in school, and their parents, who were my age, could not get work. Happy to be alive, but depressed and idle, they spent their days staring out to sea, smoking one pack of cigarettes after another. Some of them had been professionals, artists, writers, merchants, and farmers. They were in the prime of their lives and had lost almost everything. Sitting with them and sharing stories of our lives was very difficult.

Each family cooked us a special meal. The freshness of the tomato wedges and onion slices were unsurpassed. We could not stop laughing as the women with their limited English demonstrated how to roll out the filo to make the *burek* which was a delectable layered potato and cheese pie. Within 4 hours we ate three separate dinners. We talked of the options for their futures. Should their children consider schooling in America? Since they were already displaced what effect would this have on their family life? Their children brought them such tremendous joy that they could not bear to lose them. Instead, they would try to cope with their dilemma, live with the hope that the near future would bring peace, and maybe, someday, they could return to their homes in Bosnia.

The commuter bus was packed with standing room only as we headed back to the pier where the ferry to Ancona, Italy awaited us. Once aboard, I wondered how I would process the events and recover from the tremendous emotional upheavals that had occurred within me during the previous 3 weeks. I went out on deck for a deep breath. Gazing into the majestic sky, I was overcome by the huge full moon with its path of light which directed the boat through the spattering of islands along the Croatian coastline. Funny, it was the same moon, the same bright light, that often woke me as it pierced my bedroom window in Manoa Valley. Now, though, it was accompanied by the sound of waves lapping at the sides of the boat, and I was not at all concerned about what effect it might have on my pregnant patients in Honolulu.

News and Notes Henry N. Yokoyama MD

Life in These Parts

Affable **Fred Holschuh**, past HMA president and a 20-year veteran of Hilo Medical Center's ER, feels that the drug abuse rate on the Big Island is the State's worst. "Sometimes ambulances in Hilo are too busy with overdose drug abusers and drunks to pick up sick people and accident victims. A 1995 survey by the State Department of Health shows that the Big Island has a greater percentage of drug and alcohol abuses than elsewhere in the State. The Big Island has an abuse rate of 7.2% compared to Kauai's 3.47%, Oahu's 3.55% and Maui's 2.65%."

Aetna Medicare which administers Medicare Part A and Part B will close its Hawaii office on September 30, 1997. Nationwide, Aetna Medicare processed $60 million claims last year and the Hawaii office processed $1.6 million claims. Aetna merged with U.S. Health Care (a HMO with operations in 13 states) on July 19 and plans to work with Medicare managed care.

We greeted old friend (retired real estate appraiser) **Walter Loo** with "How's Virginia?" (Walter's wife had retired from her Tripler job). With his typical scowl, he replied gravely, "You know, plastic surgery saved our marriage." We were surprised that Virginia needed surgery. "Was it something major?" Walter grinned happily, "I cut up her credit cards."

Proverbs

- Medicine can only cure curable diseases and then not always *(Chinese)*
- An imaginary ailment is worse than a disease *(Yiddish)*
- Show him death and he'll be content with fever *(Persian)*
- People who take cold baths never have rheumatism, but they have cold baths *(American)*
- An ailing woman lives forever *(Spanish)*
- Only a fool will make a doctor his heir *(Russian)*
- The best surgeon is he that hath been hacked himself *(English)*
- Every invalid is a physician *(Irish)*

From Stitches Magazine

Breast Cancer Rates for Asians in the U.S. Rise

Incidence of breast cancer in racial groups per 100,000 population:

Caucasians	112
Hawaiians	100
Afro-Americans	95
Japanese-Americans	82
Filipino-Americans	73
Chinese-Americans	55

Lawrence Kolonel, deputy director of the Cancer Research Center says, "While Asian nations have the world's lowest incidence of breast cancer, even in the first decade of immigration, the incidence rises dramatically. The rate increase is 25% for the first generation Asian-Americans, 50% for the second generation and 80% for the third. Larry hesitates to say, but he suspects, the increased fat in the American diet may be the cause.

Medicare Quirk

Medicare beneficiaries are ordinarily responsible for 20% of the cost of services under Part B, but they are paying 37% of the total payments for hospital outpatient services. For some services they may pay up to 49% for outpatient surgery, radiology and diagnostic services. This may even rise to 68% by the year 2000. The federal advisory board, the Prospective Payment Assessment Commission has urged Congress to correct the problem, but neither Congress nor the Clinton administration is pushing for a quick solution because of the complexity of the problem and disagreement over who would pay the bill.

Elected, Honored, and Appointed

Alan Taniguchi, 49, was appointed to replace **Kim Thorburn** (who resigned in protest after 9 years) as state prison system physician. Alan has a variegated career, neurology private practice 1984-86; epidemiologist with the Department of Health for 10 years; and more recently, as a medical resident at the UH Med School.

Family physician **Fred Lam**, 73, was named the Waikiki Rotary Club's Employer of the Year. His two employees, office manager **Momoye Kurahashi**, 70, and nurse **Jean Kawafuchi**, 69, have been with Fred for five decades. Fred says, "I'm thinking of retiring, but with so many patients, its hard."

Physician Moves

In July, Straub announced that retired endocrinologist **Ralph Beddow** was returning to join the Joslin Diabetes Center at Straub.

In September, internist **Stuart Nakamoto** joined the Kalihi Medical Center Inc. at 2055 N. King Street; anesthesiologists **Mark Robinson** and **Mark Nishijo** joined the Physicians' Anesthesia Service, Inc. at Kuakini Medical Plaza, Suite 306; family practitioner **Al Jimenez** joined the Family Practice Center–Ewa Beach 91-775 D Papipi Road, Ewa Beach. ("Dr Al" specializes in pediatrics, adult medicine, Gyn & Geriatrics).

Straub Kapolei opened on September 16 in the Campbell Square's Kapolei Building (next to the post office, across from Bank of Hawaii and next to Kapolei Theaters) Industrial medicine specialist **Charles Kelly** will work with **Ramon Pajavillo** to provide service for employees in the Campbell industrial and business parks.

Ophthalmologist **Vernon K.W. Wong** opened his office at the Kaheka Professional Center, 1481 S. King Street, Suite 42.

Garth Morimoto's Retirement Bash

(By our favorite neurologist-humorist Mike Okihiro at Mid Pac CC July 18)

It is fortunate that Garth became an orthopedist. With his loud booming voice, he could have been an evangelist, a revivalist or Baptist minister. His voice easily carries two or three fairways.

Actually its all genetic. Garth comes from Kauai where his father was a labor union leader in the days of Jack Hall, Jack Kawano and the I.L.W.U. To be a union leader you needed a strong voice and carry a big stick.

There is no doubt that Garth was a favorite son. Many years ago, we frequently went to Kauai on our golfing trips. One night, Garth and some of his drinking buddies closed the bar at the old Kauai Surf. It was 3 a.m. and they had no car. No cabs run around Lihue at that time of night. So Garth had to call his dad.

"What's the matter, son? Something happen in Honolulu?"

"No, no, I'm here on Kauai. The boys kept me out late and we need a ride back to Kauai Resort."

Poor old dad, he didn't even know his son was on Kauai. When you hear such stories, you know that Garth was his Dad's favorite son. Of course, it helped that Garth was his only son.

And that is how Garth's familiar expletive "God dammit!" got started. When growing up on Kauai, it used to be "Garth dammit!" All the neighbors thought Mr Morimoto was using God's name in vain.

I've known Garth for thirty five years. He is a well trained board-certified orthopod. With his partner **Don Maruyama**, they've had a busy practice and it is sad to see the demise of the Hawaii Orthopedic Clinic, but time marches on.

A group of hospital personnel plan to throw a celebration party after Garth leaves. They are the hospital nurses, pharmacists and record room clerks. We know about doctors with poor penmanship. Well, these two partners at the Hawaii Orthopedic Clinic invented a script of their own. To say that Garth's writing is hard to decipher is about the nicest thing you can say about it. Actually it's impossible. Garth and Don have caused more turmoil in the Medical Records Department than the rest of the KMC staff combined. The continuous turnover of personnel in that department can be primarily traced to these two doctors. Garth even went to a handwriting expert, the kind who could tell him what his character and past life was like and his future was going to be. Garth was told, "Sorry, can only help if you write English."

I've been playing golf with Garth for umpteen years and I know his game inside-out. Garth went to undergraduate school at Ohio State and during Garth's time, they had the same coach, Bob Kepler, who taught such great golfers like Jack Nicholas, Tom Weiskopf and John Cook. If you watch Garth's practice swing, you can see he learned the swing well. He takes his club straight back, makes a full shoulder turn, points the club right at the target and then makes a strong, beautiful swing ie, a perfect arc with a great follow through. Perfecto!

Somehow, somewhere, in the great neural network that constantly intrigues neurologists, something happens when a little golf ball is placed in front of him. Now, I have to be a little clinical, so please bear with me. It may be cortical imagery that is distorted when the reflection of the ball hits the macula and the optic tract, bypassing the lateral geniculate bodies and sweeping in an arc to the occipital cortex: from the visual cortex to other cortical and subcortical areas or from the pretectal region to the Edinger-Wesphal nucleus via the posterior commissure, or from the superior colliculi to other cranial and spinal nu-

Continued from page 240

clei. It probably has to be the first of these options because association and reflex fibers pass from the occipital cortex to other cortical centers related to higher function as well as to the superior colliculi and, thus, through the tectobulbar and tectospinal tracts for voluntary and postural reflexes.

So, although we do not yet have an answer, there are a number of possibilities where Garth's perfect swing goes askew when a golf ball is placed in front of him. From the practical standpoint, my advice is simple: Next time you're on the golf course, address your club behind the ball, close your eyes and take your Tom Weiskopf swing. Guaranteed, your swing will look nice, even if you miss the Garth-dammit ball.

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The Weathervane

When giving medical advice, know what you are talking about.

Beck Weathers, MD, age 49, a Dallas pathologist and mountain climber, underwent radial keratotomy surgery two years ago specifically to avoid wearing glasses which tend to fog or ice over at high altitudes. He was told there would be no problem. However, on an Everest expedition last spring, the team was trapped by a storm, and eight of the world's most accomplished climbers died. Dr Weathers appeared to be dying, but rallied after several hours. He lost his nose, all of one hand and most of the other due to frostbite. He has lost so much vision at 26,000 feet that he could neither continue the ascent nor descend to base camp, and had to be led down the mountain. He was so hopelessly impaired that every 10 meters or so he would step into thin air and had to be caught by his rope. In the June 1993 *American Journal of Ophthalmology,* Lawrence J. White, MD reported that after 24 hours at altitudes above 9,000 feet, the eyes of patients who have had radial keratotomy undergo a hyperopic shift. PRK patients and controls did not change.

And if there is mucosal damage to the nasal septum—?

Since the Presidential days of Dwight Eisenhower, the health of the President has been a matter of public record, that is, until President William J. Clinton. Ike's heart disease, Kennedy's Addisons disease, LBJ's gall bladder, Carter's hemorrhoids, Reagan's rectal polyps, etc, were revealed to the media, nearly to the point of, "Oh, puhlease!" So, why should a President who claims to be young and vigorous, fail to reveal his medical records and put a muzzle on his physician (E. Connie Mariano, a Navy internist)? Bob Dole's health records are open to all, and the history of presidential health problems demonstrates (W. Wilson and FDR) that the public has a right to know. As with so many other factors and events with this administration, candor is not on the list of obligations.

As the Pope said to Henry VIII, "No problem. Beheading's fine, it's just divorce that makes me nervous."

The guilty doctor would probably lose his license, and might go to jail for false billings to Medicare, but the really big cheats write a check and walk away. In this case Smith Kline, is about to close a deal to pay $300 million to settle allegations that it falsely billed Medicare for blood tests performed by its clinical labs business. These are just minor administrative errors, right?

Why doesn't the FDA protect us from Dr Quinn, Medicine Woman?

The Food and Drug Administration, staunch protector of the American public, has come down hard on what it termed "illegal use of excimer laser systems that do not have FDA approval." Some surgeons, exhausted with delays in the FDA review process, re-imported devices previously used in Europe. Stephen Trokel, MD, speaking on behalf of the American Society of Cataract and Refractive Surgery (often referred to with the nematode acronym, ASCRS), expressed displeasure with the glacial velocity of the FDA. Many doctors believe that our technology is being exploited by other countries while the FDA attempts to micromanage medicine by trying to control all the details of technology development.

"No woman should go outside of her home without a machine gun."

In Texas, Mary Klager had her silicone breast implants removed which were stored with her attorney, the Texas King of Torts, John O'Quinn. The implants were simply placed in a Tupperware style container and placed with other tissue in the law office's keeping (This is legal?). The law firm sent the implants and tissue samples for pathology testing, which uncovered evidence of breast cancer. Ms. Klager had a bilateral mastectomy only to find out that she did not have cancer at all. She tried to sue the law firm, but the case was dismissed by Judge Carolyn Johnson, who has accepted campaign contributions from the powerful attorney. However, the Texas Court of Appeals overturned the judgement, stating, "We recognize that the law firm had no duty to have Klager's tissue samples tested, but as custodian it has an obligation to insure that the samples being tested correspond to the individuals to whom the test results are given."

Every cause produces more than one effect.

Of course, enlarged prostates are not a problem for eye surgeons especially since Proscar has come on the scene. But now, reports show that patients taking this drug have the highest rate of gynecomastia among the various compounds that produce this undesirable side effect. It remains to be shown if the drug actually can cause breast cancer, although two cases have been reported. Still, the risk might be acceptable for those transvestites who desire a B cup.

Progress is based upon a universal innate desire of every organism to live beyond its income.

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Social planners could use some basic instruction.

While the social architects want Hispanic children in America to be taught in their native language, 81% of the parents of those children went their offspring taught "English as soon as possible." Most Russian, Korean and Chinese, et. al., immigrant children receive intensive English instruction, but not Hispanics. Somebody finally got around to asking the parents of the Hispanic children how they want their children educated. What a surprise!

Addenda—

- Average distance between conversational partners in the U.S. is 18 inches; Japan 2 feet; Mexico 12 inches.
- Don't use a big word where a diminutive example will prove sufficient.

Aloha and keep the faith—rts.

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Editorial

Norman Goldstein MD

Dedication to Fred C. Holschuh, MD

This issue of the Journal is dedicated to a very special colleague, Hawaii Medical Association's past President and Big Island Emergency Room physician, Dr Fred Holschuh.

Fred has had a varied professional career. After obtaining a medical degree at Columbia, he served his internship at Queen's Medical Center and then a pediatric residency at Children's Hospital. So far, not so unusual. But then Fred went with Dr Michael DeBakey's team to the People's Republic of China in 1973 and served as a medical missionary in Guatemala. In 1986, he participated in the first Sino-American Emergency Medical and Critical Care Conference in China. In 1971, he co-founded the Hawaii Emergency Physicians Association, and has been in Emergency Medical practice for a quarter of a century!

Fred and his wife live in Honokaa, where he has been very active in organized medicine. Through his various positions with the Hawaii Medical Association, Fred has served the entire State and continues to do so. When asked to contribute a manuscript for this Special Issue, Fred said, "Sure, but what I really want to do is share some of my many ER experiences relating to Death with Dignity." And he does it so well in our lead article.

Mahalo nui loa, Fred.



Good Life—Good Death

In most cultures, there exists a ceremonial raising of the cup to celebrate life. The Hebrew toast is "La Chaim," but a better one might be "La Chaim Tov"—To the Good Life. Perhaps the best salute would include the sentiment found on the logo of the Hemlock Society ,"Good Life—Good Death." This special issue is devoted to that end; a good death for our patients. There are several excellent books to round out your reading on this subject, including: *Final Exit;* the *Right to Die*; *Let me Die Before I Wake*; *Final Choices: When It's Right to Die*; and *Death with Dignity*. These and other related volumes are now available at the Hawaii Medical Library's section on Death with Dignity, and from Hemlock Society USA (see the ad and membership information in this issue).

My personal interest in death with dignity began two and a half years ago, and I am frequently asked why a dermatologist is concerned with this subject, since "skin patients never die!" Well, we all die eventually, though usually not of skin related illness, so it is sensible to consider how we would want our final days to elapse if given the choice. While still an intern in New York City, I started carrying a copy of my "Last Wishes" in my wallet. At that time, I wanted to be kept alive—no matter what! I did not want anyone to "pull the plug" under any circumstance. I wanted to stay around as long as possible, regardless of my state of awareness and despite any medical maladies. This outlook has changed with the wisdom of age and the passing of my parents.

Today we are blessed as a society with the ability to prolong healthy, productive lives and provide compassionate pain-free care to those with terminal illnesses. During this season of reflection, you might raise your glass in a tribute to a time of enlightened medical care.

Here's to "Good Life, Good Death."

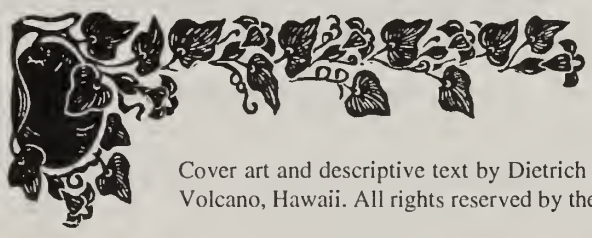
HMA President's Message

John S. Spangler MD

This great issue of death with dignity involves all of us as we all will need rational help at the time of our death. Physicians need to contemplate and analyze their own feelings about this topic.

We all need family support at the time of death with dying being a normal function of a living animal. Our pets receive comprehensive care in this manner. Someday we'll hope that we will have a death with dignity for all.

I congratulate the editor for dedicated work on this issue. Please read and discuss these articles with your family and loved ones.



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"Damien"

Father Damien, a Belgian priest, lived with the Leprosy patients at their isolated colony at Kalaupapa on the island of Molokai. His mission was to mend their sores as well as their souls. Inevitably he died of Leprosy and has since been beatified. He is now a candidate for canonization.

Military Medicine

Dateline: Boualapha, Laos

Ben Berg MD

Dr Edward Chu, staff cardiologist at Tripler Regional Medical Center was deployed to provided medical care for a team of U.S. personnel during a 26 day mission to Laos in October, 1996. The team was on a regularly scheduled mission to search for and recover the remains of servicemen who remain missing, or were killed in action, during the Vietnam Conflict. This team is part of a standing Hawaii based joint task force which has conducted the ongoing recovery mission for the past 18 years. Dr Chu was accompanied by 4 trained medics, from the Army, Navy, and Air Force. His report of this experience follows.

During the month of October, at the end of the rainy season, the weather was very hot but dry, with a few days of high humidity and heavy rain. Mosquitos, large centipedes and snakes were regular visitors to the Boualapha base camp site, as this is normally a prairie for the town water buffaloes, pigs and chickens.

Medical care was provided in the Khammouan and Savannakhet provinces, Laos Peoples' Democratic Republic from 2-28 October 1996. This included thirteen Medical Assistance Programs for the local civilian population. Workers and/or villagers at field sites, and at Boualapha District Hospital of the Khammouan province were evaluated and treated. Villagers in the towns surrounding Ban Passang of the Savannakhet province and in the town of Ban Nantanchai of the Khammouan province were also evaluated and treated. A total of 465 patients were seen.

Most villages have a "village healer." Larger villages or towns may have a nurse who is trained at Vientiane. District hospitals have physicians and nurses. Boualapha District Hospital has 4 physicians who are from the district and are trained at a four year medical "school," and 29 other personnel. Muang Xepon District Hospital has 2 physicians and 20 nurses.

The physicians are trained at the "medical school" at Vientiane, a four year program following high school. They then are sent to district level hospitals for "on-the-job-training" but rarely have a very senior physician. The physician with whom I primarily worked, Dr Sisombat, seemed concerned, interested in learning, and knowledgable about the local diseases. He had little understanding of pathophysiology or pharmacology. I would estimate that the local Laotian physician has an equivalent level of training to US physician assistants.

The Lao patients were generally healthy, with the majority performing manual labor as farmers. Most complaints were associated with work related injuries/exposures or communicable tropical diseases. Commonly encountered conditions included; Ectoparasites: lice or mites; "worms"/intestinal parasites: likely to be either Asacaris Lumricoides, Tricuris trichiuria, Enterobius vermicularis, Stronglyoides stercoralis, Taenia solium, or a combination, and malaria or Dengue fever. Medications for these diagnoses were limted and depleted early in the course of the mission. Malaria was frequently seen as a chronic illness with massive hepatosplenomegaly and had a significant impact on pediatric growth retardation.

Villagers were open to western medicine, however had faith in the local traditional healer. The women tended to be shy and refused gynecologic exams when complaining of pelvic pain. Although having an exam by a male "foreigner" is likely to be a significant factor, I suspect that this a medicine taboo. The overwhelming majority of people smoked, from as early as age 3. Many women chewed betel nut. Most men drank the local rice whisky, laolao.

Preventive dental kits were distributed at all sites to 144 children and adults with significant gingivitis. All women of child bearing age, pregnant or after recent delivery received prenatal vitamins. Preventative health measures are generally absent in the villages.

Water was generally untreated from the local river or stream. Food consisted of rice, water buffalo and chicken meat and local greens. Sanitation in the smaller villages appeared quite good but the larger towns or cities were very dirty. This is probably due to the common belief, in the tropics, that the jungle or the ocean will consume the wastes. This is very true without western products (plastics, heavy paper goods and metal cans), but with increasing population density and western products, sanitation is poor.

Boualapha district hospital

The hospital is open 24 hours a day and always has a physician on duty. The maximum capacity of the hospital is 12 patients, with the monthly census of about 30 patients. The hospital was clean but with limited facilities to include an open air room for minor surgical procedures, a delivery room, a "laboratory" consisting of an ambient light microscope for malaria smears and a pharmacy, primarily stocked by previous U.S. team missions and locally acquired herbal "therapies." Herbal medications included products from roots and small trees in the local hills. These preparations were used to treat maladies ranging from rheumatism to headache, to "women's" problems. The instruments for surgery appeared old, rusted and non-sterile but clean.

The hospital receives funding and supplies from the provincial capitol but frequently operate without medications or sterile supplies. Needles, IV tubing and bottles, "disposable" surgical equipment and catheters are reused after "cleaning."

The top three diagnoses noted by Laotian physicians were malaria, bronchitis, and diarrhea. Trauma was generally minor except after harvest season when a "slash and burn" technique for farming reaped 10-15 cluster bomb explosions, with the majority resulting in death. There is a team from the district hospital that travels to the villages once a year to vaccinate for the following: measles, diptheria, polio, pertussis, small pox, and for tuberculosis protection. There have been attempts to eradicate worms and provide iodized salt supplements to prevent thyroid goiters.

Clinical Cases

An elderly villager fell from her elevated house and suffered an apparent open mid shaft femur fracture. A U.S. team was sent from their worksite to the village and care was provided by the team medic. Although she was transferred to the site for medical evaluation, she and her family declined further care and she was then transported to the care of the "village healer" and died three days later.

Two burn patients in the village of Ban Napang were treated. The burns were incurred from mosquito netting fire and burned a woman in her 30's, a 6-year-old child and an infant who expired shortly after the injury. Initial evaluation and treatment was denied by the Lao officials, but allowed after a visit to the village by the U.S. team. Escharotomies were performed to 4 to 6% second and third degree burns. The child survived after debridement of the wounds.

Do you agree

- With the 75% of Americans who, in a 1996 Gallup poll, said Yes to the question: "When a person has a disease that cannot be cured, do you think doctors should be allowed by law to end the patient's life if the patient and his or her family request it?"

- With the majority of physicians in Washington, Oregon, Michigan and Colorado who endorse the idea that doctors should be able to offer patients help in dying as part of the continuum of terminal care?

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An Emergency Physician's Perspective on Death with Dignity

Frederick C. Holschuh MD

Paramedics respond to the cardiac arrest of an elderly man in his home. As they start CPR, the son produces a valid living will with "no resuscitation" instructions. While they are discussing this with me at the Medicom base station, another son runs in, tears up the living will, punches his brother and demands CPR, which was then restarted.

A young hanging victim with a hopeless brain injury has a cardiac arrest. I spend more time after responding to the ICU, helping the mother come to grips with stopping futile CPR than actually doing "medical care."

A comatose man with an horrendous brain injury from a gunshot wound goes to ICU on a ventilator after I had a long discussion with the mother about organ donation. He ultimately leaves rehab walking and talking.

A 95-year-old man with terminal metastatic cancer comes to the ER in cardiac arrest. The family demands that "everything be done." He spends his final days in ICU comatose with multiple tubes, machines, etc.

A chronically ill woman with a valid living will has a respiratory and cardiac arrest at home when her guardian is out shopping. After CPR, she is on the ventilator in the ER when the family arrives with all the documents and begs me to stop treatment and let her die at home. We discontinue everything, they take her home and after dying at home, the body is returned three hours later for pronouncement. Incidentally, I had to ask the police officer to reword his report that said "patient came to ER with trouble breathing and Dr Holschuh sent her home to die."

An elderly woman with smoking-related terminal chronic obstructive pulmonary disease (COPD) with a valid living will stating "No ventilator care or intubation," comes by ambulance in pulmonary failure. As she is slipping into unconsciousness, in spite of initial treatment, from C02 retention, her eyes open and she gasps "Please save me." Since she verbally countered her advanced directive she was immediately intubated and survived that episode.

A 50-year-old man walked alone into the emergency department up to the nursing desk. He reached out to get attention and collapsed in cardiac arrest. The crash cart was brought to the spot, he was defibrillated immediately and about one week later came by the emergency department to thank the staff for "his life." We had no idea who he was or whether he had an advance directive that first day.

All of these are real cases that happened to me within the last few years in Hilo. All of them demonstrate how complex end-of-life decision making can become and the importance of good communication in the process. Whatever one believes about God or a Creator, man may have been given wisdom and skill by the Creator, but the Creator didn't produce the machines or technology. Our scientific advances have far outstripped our ethical understanding, good intentions, and common sense. We have a legal system that at times paralyzes caregivers who attempt to make sound decisions. And, we are now faced with emerging health delivery models that some patients fear may someday stop lifesaving treatments for chronically ill people to save money.

At the June 1996 Annual AMA House of Delegates meeting in Chicago, a nationally publicized debate took place regarding resolutions that asked the AMA to alter its position against physician-assisted suicide to at least a neutral position. Recent U.S. Circuit Court of Appeals decisions on the east coast and the 9th Circuit Court (which includes Hawaii) have essentially removed prohibitions on physician-assisted suicide. I got the feeling that many of the physicians who spoke at the reference committee and on the floor of the AMA House of Delegates against physician-assisted suicide might in private discussion feel differently if they felt they had no voice in terminating their own end of life care.

The U.S. Supreme Court is taking up the circuit court decisions, and the AMA held to its position against physician-assisted suicide but some very interesting discussions occurred at the AMA which lead me to think we must continue to participate in all these discussions and debates, keeping the patent's best interests as our focus.

The activist group "Not Dead Yet" which represents many disabled individuals, lobbied against physician-assisted suicide at the AMA meeting. They have been very outspoken nationally and have called Dr Jack Kevorkian a "serial killer." I spoke with some of the protest group members including a very articulate attorney who is afflicted with some neuromuscular disorder and is wheelchair bound. She emphasized the very real concern that many of them have, that a vote to change the AMA position might eventually lead to overzealous attempts by managed care organizations to end the lives of severely challenged people . Many of their members are on home ventilators and fear attempts to discontinue their use.
Some points of debate and discussion which I feel need to be continued:

(1) Physicians must be sure the discussion on dying is brought up early on with patients and families. Families and patients must be counseled that withholding resuscitative efforts and extreme technological support is not equivalent to lack of caring. Quite the opposite; often not treating a specific terminal condition and addressing the dying process may be the ultimate act of caring.

(2) Physicians must be able to relieve pain and suffering, even if it hastens death; without fear of legal challenges.

(3) As Dr Stephen Wallach, Honolulu cardiologist, has often said, we don't want to damage the existing living will laws, but we can make it work better without legislation by good communication with patients and families. When my parents did their first living wills, my mom wouldn't have allowed the Heimlich maneuver until I explained specific details of resuscitation. For instance, if a patient has a living will addressing a terminal condition and has an electric shock or near drowning, do you not treat these reversible conditions? It gets back to common sense and good communication.

(4) Physicians must be more proactive with advanced directives. I see many chronically ill patients in the emergency department who



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Adverse conditions infrequently reported include dryness, erythema and pruritus.

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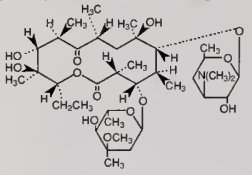
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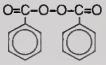
Reconstitute Before Dispensing

Description: Each gram of Benzamycin® (erythromycin— benzoyl peroxide) topical gel contains, as dispensed, 30 mg (3%) active erythromycin and 50 mg (5%) benzoyl peroxide in a gel vehicle of purified water, carbomer 940, alcohol 20%, sodium hydroxide, docusate sodium and fragrance.

Erythromycin ($C_{37}H_{67}NO_{13}$) is produced by a strain of *Streptomyces erythraeus* and belongs to the macrolide group of antibiotics. Erythromycin has a molecular weight of 733.94 and is represented by the following structural formula:



Benzoyl peroxide ($C_{14}H_{10}O_4$) is an antibacterial and keratolytic agent. The structural formula is:



Clinical Pharmacology: Erythromycin is a bacteriostatic macrolide antibiotic, but may be bactericidal in high concentrations. Although the mechanism by which erythromycin acts in reducing inflammatory lesions of acne vulgaris is unknown, it is presumably due to its antibiotic action. Antagonism has been demonstrated between clindamycin and erythromycin.

Benzoyl peroxide is an antibacterial agent which has been shown to be effective against *Propionibacterium acnes*, an anaerobe found in sebaceous follicles and comedones. The antibacterial action of benzoyl peroxide is believed to be due to the release of active oxygen. Benzoyl peroxide has a keratolytic and desquamative effect which may also contribute to its efficacy.

Benzoyl peroxide has been shown to be absorbed by the skin where it is converted to benzoic acid.

Indications and Usage: Benzamycin Topical Gel is indicated for the topical control of acne vulgaris.

Contraindications: Benzamycin Topical Gel is contraindicated in those patients with a history of hypersensitivity to erythromycin, benzoyl peroxide or any of the other listed ingredients.

Precautions: General—For external use only. Not for ophthalmic use. Avoid contact with eyes and mucous membranes. Concomitant topical acne therapy should be used with caution because a possible cumulative irritancy effect may occur, especially with peeling, desquamating or abrasive agents. If severe irritation develops, discontinue use and institute appropriate therapy.

The use of antibiotic agents may be associated with the overgrowth of antibiotic-resistant organisms. If this occurs, administration of this drug should be discontinued and appropriate measures taken.

Information for Patients–Patients using Benzamycin Topical Gel should receive the following information and instructions:

1. Benzamycin Topical Gel is for external use only. Avoid contact with the eyes and mucous membranes.
2. Patient should not use any other topical acne preparation unless otherwise directed by physician.
3. Benzamycin Topical Gel may bleach hair or colored fabric.
4. If excessive irritation or dryness should occur, patient should discontinue medication and consult physician.
5. Discard product after 3 months and obtain fresh material.

Carcinogenesis, Mutagenesis and Impairment of Fertility: Long-term studies in animals have not been performed to evaluate carcinogenic potential or the effect on fertility.

Pregnancy Category C: Animal reproduction studies have not been conducted with Benzamycin® Topical Gel. It is also not known whether Benzamycin Topical Gel can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Benzamycin Topical Gel should be given to a pregnant woman only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Benzamycin Topical Gel is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children below the age of 12 have not been established.

Adverse Reactions: Adverse reactions which may occur include dryness, erythema and pruritus. Of a total of 153 patients treated with Benzamycin Topical Gel during clinical trials, 4 patients experienced adverse reactions, of whom three experienced dryness and one an urticarial reaction which responded well to symptomatic treatment.

Dosage and Administration: Benzamycin Topical Gel should be applied twice daily, morning and evening, or as directed by physician, to affected areas after the skin is thoroughly washed, rinsed with warm water and gently patted dry.

How Supplied and Compounding Directions:

Size (Net Weight)	NOC 0066-	Benzoyl Peroxide Gel	Active Erythromycin Powder (In Plastic Vial)	Ethyl Alcohol (70%) To Be Added
23.3 grams (as dispensed)	0510-23	20 grams	0.8 grams	3 mL
46.6 grams (as dispensed)	0510-46	40 grams	1.6 grams	6 mL

Prior to dispensing, tap vial until all powder flows freely. Add the indicated amount of ethyl alcohol (70%) to vial (to the mark) and immediately shake to completely dissolve erythromycin. Add this solution to gel and stir until homogeneous in appearance (1 to 1½ minutes). Benzamycin Topical Gel should then be stored under refrigeration. Do not freeze. Place a 3-month expiration date on the label.

NOTE: *Prior* to reconstitution, store at room temperature. *After* reconstitution, store under refrigeration. Do not freeze. Keep tightly closed. Keep out of the reach of children.

Caution: Federal (U.S.A.) law prohibits dispensing without prescription.

U.S. Patent Nos. 4,387,107 and 4,497,794.

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have never had living will discussions brought up by their doctors. I recently had a discussion about advanced directives with the children of a patient with end stage heart disease, who thought the discussion of a living will was the equivalent of contemplating euthanasia. We as a medical association must help with far reaching public education.

(5) We must bring the discussion of comfort care, quality of life, and similar issues back into our patient care activities. It is easier to activate our high tech medical system than to evaluate the benefits of doing so. A recent *New England Journal of Medicine* article on the results of resuscitation on "ER," "Chicago Hope" and "Rescue 911" showed that the public is given an "unrealistic impression of CPR and its chances for success."[1] I've actually had people in the Hilo ER assume that arrival by ambulance at the hospital after a cardiac arrest equals survival.

(6) Physicians must support their patient's valid advanced directives. I'm very distressed at seeing family members sometimes successfully coerce a treating physician into not following mom or dad's advanced directive. In my opinion, this should include decisions on organ donation. There must be sanctity in these decisions. We would want nothing less for ourselves.

(7) Because so many people are addressing physician-assisted suicide and voluntary euthanasia, I think organized medicine must at least be involved in these discussions.

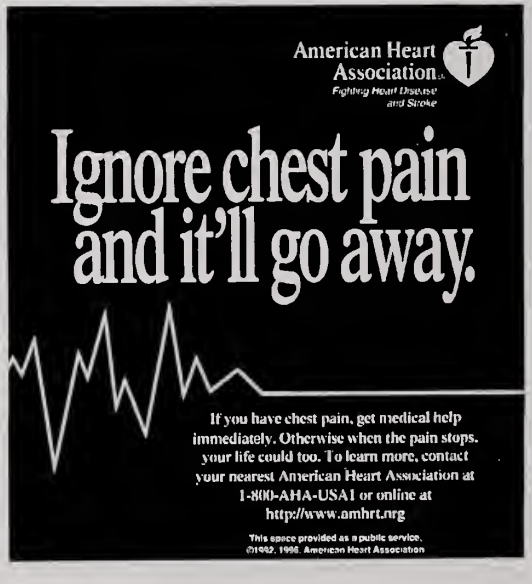
Finally, a George Washington University gerontologist says she can get intensive care for her patients easier than she can get them eyeglasses.[2]

The late Dr David Eckstein, former chair of the medical society of New Jersey Committee on Biomedical Ethics stated "Do the best for the patient—not necessarily the most."[3]

Dr William Knaus quoted in a People Magazine article "Last Passage" said: "Death is universal; its never too early to start talking about it. We need to recognize that dying is one of the more important things we will do in life. It will be the last memory we leave to those we love. And if we want to do it better, than we're going to have to talk about it."[2]

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Death with Dignity: The Case of Physician-Assisted Suicide

Norman Goldstein MD, FACP*

As a higher percentage of our population turns gray, we are forced to think about the final days of our loved ones. With increasing morbidity from AIDS and HIV among other serious terminal illnesses, we can no longer depend on the *miracles of medicine* to keep us alive. There are those who die peacefully, but more who suffer pathetically — needlessly — and we all know of those who have been kept *alive* with *pipes and pumps.*

You might ask "why is a dermatologist concerned with physician-assisted suicide?" My patients, just like our State's population, are living longer — and they die of cancer, of HIV infection, and of the many other infections that can be fatal. Every week I see patients asking for information about *death with dignity.* I have to tell them that in Hawaii and all other states, it is illegal to render aid, and a physician can lose his or her medical license or go to prison for doing so." I refer these patients to the Hemlock Society of Hawaii. My wife and I are *Life Members* in Hemlock Society. Hemlock has many excellent publications and resource materials on passive and active *Death with Dignity.* Many of these books are now available at the Hawaii Medical Library.

At a recent meeting of The Hemlock and Mortuary Societies of Hawaii, A.A. "Bud" Smyser, contributing editor of the Honolulu Star-Bulletin and Hawaii's leading advocate for physician-assisted suicide, spoke to a full house on "Dying is Looking Better." Bud's very popular "Hawaii's World" column dealing with death with dignity appearing in the Honolulu Star-Bulletin and has been reprinted in our Journal over the past six months.

All dying can be assisted by pain control, which is readily available today. Why then do some physicians withhold strong pain medication for fear of getting their patients addicted? When death is near and suffering persists, it is the doctor's role to alleviate that suffering. Our State House of Representatives may be seeking legislation to encourage physicians to administer higher doses of pain medications when needed.

* Clinical Professor, Medicine (Dermatology)
John A. Burns School of Medicine
University of Hawaii

When my 88-year-old father came to live with us in Hawaii, he had both prostate and lung cancer, which had spread to his bones. His mind was astute, but his body was failing. He wanted "neither pipes nor pumps, heroics nor hospital." He lived in our home for the last year and a half of his life. Thanks to his geriatrician, Gary Johnson, MD, weekly visits by compassionate nurses, and a long-lasting pain pill, he was alert, without any pain, even on his dying day.

As a California hospice director told Bud Smyser, a good death should also focus on the survivors, because "the memories are with us for a long time." We want them to be happy ones.

The Hospice Movement

The first modern hospice was opened in London in 1967. The hospice concept started on the mainland in New Haven, Connecticut and Marin County, California in 1977. The next year, the late Sister Maureen Keleher established Hawaii's first hospice. We now have eight. The Hospice Program focuses on providing positive deaths and family support instead of using life-extending measures.

While hospices serve a portion of Hawaii's dying population, there are not enough programs. Many patients need *more active assistance.* In the 1950's, a majority of Americans died at home. In 1985, 80% of America's two million deaths occurred in institutions, which are extremely expensive. (Editor's Note: see the manuscript by Warren, "St. Francis Hospice: Medicare and Health Care Reform" on page 276)

Max Botticelli, MD, emeritus Professor and former Chief of Medicine at the UH medical school, wrote in "The High Cost of Dying" (Honolulu Advertiser - June 11, 1995) "Since the 1960's, about 30% of annual Medicare expenditures have been for care provided to patients who die in the same year; 12% for care given in the last month of life!" Dr Botticelli suggests some steps to a "Happy Death."

- Stop striving to attain immortality on earth. Eventual death of our bodies makes good religious and biologic sense.
- Make physicians more aware of their responsibilities to dying patients. The prescription of futile care is unethical and unprofessional.
- Establish a commission to set priorities for health care services.

Botticelli feels the soaring costs of health care cannot be solely at the feet of physicians who exercise poor judgment. The community at large is also at fault. This includes some in the legal profession, some religious leaders, the general public and the family and friends of the terminally ill patient. His manuscript on "Choosing to Die" which appears on page 257 is a poignant piece of prose — and reality.

We are making progress in relieving suffering for the terminally ill here in Hawaii. When Dr Reginald Ho was president of the

American Cancer Society, they adopted a national policy recommending no limitation on pain medicine administration. Drs Botticelli and Ho are part of an ad hoc committee, chaired by the ever-energetic Ah Quon McElrath, dealing with Death with Dignity. McElrath contributed a manuscript on "The Elderly and Disabled in Hawaii." (see page 258)

Hippocrates Didn't Know Everything!

Hippocrates lived in Greece from 460 to 370 BC. One of the world's most famous physician-teachers, he had phenomenal influence on medicine more than two thousand years ago, and still does, but much of what he taught has now been proven wrong. Over the centuries, many legends were attributed to him; for example, honey from a bee hive on top of his tomb was supposed to have had "exceptional curative powers."

> He thought that nerves were hollow and confused them with ligaments. He did not understand the difference between arteries and veins, or that the retina was the organ of sight. He thought "semen" from the left ovary produced girls.

Despite these and other medical errors, the Hippocratic Oath continues to be administered to medical school graduates at most schools in the country, including our own. Many have modified the oath so that Hippocrates probably would still recognize it, but might disagree with it.

The original oath says, in part:

> "I will neither give a deadly drug to anybody if asked for it, nor will I make a suggestion to this effect. Similarly, I will not give to a woman an abortive remedy. I will not use the knife, even on suffering from (kidney) stone."

The modified version, administered for many years by the late Charles Judd, MD, to Hawaii's medical school graduates, includes:

> "I will not endanger a patient's life by prescribing unnecessary dangerous drugs, nor will I give advice which will cause harm. I will endeavor to be my patient's advocate before society, and to aid my patients and their family in weighing and making the serious decisions that surround illness and death. Although life is sacred, death is inevitable, I recognize that it is the duty to treat the whole patient. The continued life of the patient's body is one consideration, but I will also consider the impact of treatment on quality of life and psychological well-being in making therapeutic decisions."

Choice in Dying, Inc., a national not-for-profit organization dedicated to fostering communication about complex end-of-life decisions among individuals, their loved ones and health care professionals,* is now working with ten medical schools across the country to improve medical education in the care of dying, beginning this semester. At the end of this five-year project, the results will be compiled into a technical manual that will help other medical schools integrate similar death and dying teaching into their programs.

Our medical school is not part of this study but, according to Leslie Q. Tam, PhD, Director of Medical Education, we do have an active program at the John A. Burns School of Medicine.

In the first year, students spend one half-day a week in a community medicine hospice experience. They go through a 20-hour orientation program at St. Francis or Queens hospital and are then assigned their own patient whom they visit once a week for the 15 weeks. Often, students develop strong relationships with terminally-ill patients and continue the hospice experience until the patient dies. It is a rich and touching role for some students, coming early in their education.

Over the first two years, students meet in tutorials and study a total of seventy health care problems. Among these problems are patients and families who must deal with death and dying. Examples are a 50-year-old nurse with breast cancer, an adult male with transitional cell carcinoma, and a lone-immigrant to Hawaii with colon cancer. In tutorials, students are encouraged to discuss not only the biological and clinical aspects of the problem, but also the populational and behavioral aspects of the case, including death and dying. Many of these discussions are profound. Some are superficial, depending on the make-up of the tutorial, the maturity and readiness of the student to discuss such issues and the ability of the tutor to facilitate discussion.

Finally, the school has offered colloquia by Max Botticelli, S.Y. Tan, Mits Aoki and Ken Kipnis on subjects such as "Death and Dying," palliative care and ethical issues.

While there are no formal courses on "Care of the Dying" or "Choice in Dying," students are exposed to these problems by the methods described above. Whether or not these experiences are effective is as yet unknown.[1]

Richard MacDonald, MD, Medical Director of the Hemlock Society U.S.A., noted the conclusions drawn by Dr S.Y. Tan in the April 1995 special issue of the Hawaii Medical Journal on Medicine, Law and Bioethics, saying "Lawyers and the courts are overly intrusive in patient-care matters. Like Damocles' sword, the law hangs over the heads of health care providers, frequently impeding rather than fostering their efforts to look after the best interest of their patients." Dr MacDonald has also submitted a manuscript for this issue on the training of medical students on page 294.

The manuscripts in this Special Issue were submitted by—people concerned with the lives and deaths of their patients, their family members, their friends and themselves.

As Bud Smyser said in his August 13, 1996 "Hawaii's World" column—"Hawaii needs a policy on assisted suicide." (November 1996 Hawaii Medical Journal, page 230). It is hoped that this Special Issue of the Journal will help to stimulate our medical community as well as the lawyers and legislators in Hawaii, to decide on a sensible policy dealing with Death with Dignity.

Editor's Note:

This manuscript is based on a major story in the *Honolulu Advertiser* December 17, 1995: "Should Doctors Help End Lives." I took the "Yes" position—allow patients to Die with Dignity. S.Y. Tan, MD took the opposing view, "No: would hurt infirmed; open to abuse." Dr Tan was Guest Editor for our Special Issue on Medicine, Law and Bioethics in April 1995, and has another provocative manuscript, "Why I Do Not Believe in Euthanasia" in this issue (page 273).

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Choosing to Die

Max G. Botticelli MD

Margaret was 90 years old when she suddenly became irretrievably demented and bedridden. A devout Episcopalian and accomplished poet, she had valued her active and enjoyable life but was unafraid of death. She once wrote:

> "It may be spring when death comes by,
> Or summer's heat or autumn's flare
> Or winter's frost, I do not care.
> I've breathed too long this earthly air
> I've lived with faith; with faith I'll die."

Hoping to avoid a prolonged death, she had completed a living will with instructions that she not be kept alive with feeding tubes or other extraordinary means. But despite strict compliance with her instructions, she continued to languish another eighteen months. She was fortunate, this lifeless existence could have lasted much longer.

Her friend Greta chose differently. A sprightly and active 89 year old despite persistent painful symptoms, she came to the realization that her exemplary life was at its spiritual end and committed suicide. This decision was discussed thoroughly with her family who asked that they be allowed to take part in her death. They dined together the night before, sharing lighthearted and loving reminiscences. The following day she took a lethal dose of barbiturates prescribed by a compassionate and caring physician and died in her own home in the company of her family.

Suicide was not an option for Margaret partly because her life was physically enjoyable and spiritually fulfilling. She had no desire to end it before her illness and once she became incapacitated she was unable to do so. Supposing, however, she had included advanced directives in her living will instructing her family and physician to help her die in the event of her incapacity. Could they have legally provided such help?

There was a short period of time when helping someone commit suicide was legal in Hawaii. The legislature of the State of Washington had enacted a law making physician assisted suicide a crime. It was challenged in the United States Ninth Circuit Court of Appeals which declared any such statute unconstitutional. This had the effect of making such acts legal in the states of the ninth district. Subsequently, Supreme Court Justice O'Connor issued a stay of that decision making it illegal again.

Even during that window of opportunity, however, the help that Margaret would have needed to die could not have been provided legally. In its decision the court made a distinction between degrees of assistance. Providing a lethal agent to a patient who uses it to commit suicide, as did Greta, was called "physician assisted suicide". Administering the lethal agent to a patient who has left instructions to do so, as would have been necessary in Margaret's instance, was defined as "physician aided dying". Euthanasia was distinguished from both as being "an involuntary act " occurring without instructions from a terminally ill competent adult. The court excluded both physician aided dying and euthanasia from its decision.

It was a moot point anyway because Margaret considered suicide a violation of the deeply held religious faith by which she lived and died. She was free to make this choice which was consistent with the teachings of most religions which accept the inevitability of death while characterizing suicide as immoral and physician assisted suicide as murder.

But, life expectancy has been extended far beyond what jurists, philosophers and church fathers could have imagined. The laws and religious taboos created by them for more natural times are considered by some as unreasonably limiting for the elderly in this technological age.

Because most Americans are religious and because the fear of death is so ingrained in our culture, suicide will never become a popular way to die. Yet polls suggest that a large segment of our population supports giving competent adults assistance when they are ready to end their lives. They are apparently unconvinced that there is a compelling interest on the part of the government to thwart the desired deaths of those of us who are in the twilight of our lives. Nor are they concerned that this represents a slippery slope leading towards involuntary euthanasia.

Unfortunately, it requires more than a poll to give us this freedom. We need a change in public policy so that the elderly are assumed:

- Protection against overly aggressive medical care.
- Assisted suicide for the terminally ill.
- Assisted dying for those who leave advanced directives defining when they would prefer to die.
- Protection against involuntary euthanasia.

Margaret and Greta had significantly different religious views which made suicide an option for one and not for the other. However, neither of these gentle and understanding humans, would have presumed to judge the other's actions. That degree of tolerance is what is needed now. Those who value life more than dignity and are free to choose how they might die should help their fellow humans who value dignity more than life gain the same freedom.

Editor's Note:
Max Botticelli has been a professional colleague and personal friend for almost three decades. Now that he is retired, he devotes a great deal of his time speaking and writing on Death with Dignity related subjects, and is a very active member of AhQuon McElrath's ad hoc committee. His feature in the Focus section of the *Honolulu Advertiser* on the "High Cost of Dying: Too Much is Spent Delaying the Inevitable" in Section B, Sunday, June 4, 1995 is in today's jardon "Right On." Many thanks, my friend.

The Elderly and Disabled in Hawaii

Ah Quon McElrath

Any discussion on death and dying must take place within the context of Hawaii's multi-ethnic and multi-cultural environment as well as other factors such as pertinent laws, the nature of the population, economic well-being and its effects on housing, health care, leisure activities, availability of services, and the cost of taking care of the aged and disabled.

The following information provides the background against which articles in this very special issue on Death with Dignity can be given added meaning and urgency.

Population

Approximately 1.2 million of which 56% are born in Hawaii, 26% on the mainland, and 18% are foreign born.

Ethnicity

24.1% Caucasian; 20.4% Japanese; 18.8% Hawaiian and part Hawaiian; 4.7% Chinese; 11.4% Filipino; 1.1% Korean, 1.5% Black; 0.6% Puerto Rican/Samoan; 17.5% mixed non-Hawaiian.

Age

12% 65 years and older, of which 52.5% are female; projected to increase to 17% by year 2020, when baby boomers begin reaching 65 by year 2011 and when the elderly will be fasted growing segment of population.

Immigration to Hawaii accentuates the Asian-Pacific influence that pervades the state's culture. Since the Immigration & Nationality Act of 1965 with its amendments is based primarily on the philosophy of family reunification, it is likely that Hawaii will continue to be the destination of future immigrants. Annually 6,500 to 8,500 new immigrants come to Hawaii.

- 7,746 immigrants in 1994 (latest available figure) from 11 countries, of which 3,258 were from the Philippines and 714 from the Peoples Republic of China.

Life Expectancy

- 75 years for males; 81 years for females; second only to Japan.

Income

Hawaii's aged and disabled individuals have income derived from government or private pensions; personal assets; Old Age; Survivors, & Disability Insurance ("OASDI," but more popularly known as Social Security); Supplemental Security Income (SSI-the need based money payment program for the aged, blind, and disabled); family contributions; and employment.

- 23% have no income or income under $5,000
- 58% have income between $5,000 and $29,999
- 19% have income between $30,000 and over $50,000
- $19,534 median income of older men not living alone
- $16,228 median income for men living alone
- $8,040 median income for older women not living alone
- 11,804 median income for women living alone
- 14% of older persons live below, at or 125% of the federal poverty level, which in 1996 was $8,910 for a single person and $11,920 for a couple.

At the end of December, 1994, over 10% of Hawaii's population received OASDI, or social security. Average monthly benefit was $627.20 and covered retired and disabled workers with widowed spouses, parents, and children.

- 161,840 total number of beneficiaries
- 113,240 retired workers, with monthly benefits from less $300 to $1,100 or more
- 9,380 disabled workers, with monthly benefit from less than $300 to $1100 or more
- 14,300 nondisabled widowed spouses with monthly benefit from less than $300 to $1,100 or more
- 12,250 children, with 9,870 under age 18 and 160 students between 18-19

At the end of December, 1995, there were 18,731 individuals receiving supplemental security income. Eligibility is based on need and as of 1996, an individual could receive a maximum monthly payment of $470, while a couple could receive $705, with a small state supplementation.

- 7,552 aged with average monthly amount of $318.58
- 159 blind with average monthly amount of $430.31
- 11,020 disabled with average monthly amount of $419.44

Food Stamps

A need-based program with less stringent eligibility requirements than those for Aid to Families with Dependent Children. The number of recipients is affected by economic conditions. In Hawaii the rolls have increased because of Hurricane Iniki, closure of sugar and pineapple plantations, and downsizing of other industries.

Value of stamps range from $197 for an individual to $1,193 for a family of eight.

- 131,049 beneficiaries in 58,886 households as of June, 1996.

Employment

Labor force of 592,700 as of June, 1996, of which 556,000 were employed. Unemployment rate of 6.2%. Twenty percent of employed in county, state, and federal governments.

The projection is that by 2020, there will be only two to three people of working age for every one person 65 years and over; in 1950 there were 13-1/2 persons of working age for that age group.

- 78.4% of Hawaii's elderly do not work
- 21.6% work less than half time to more than full time.

Housing

Although home ownership in Hawaii is not as high as that on the mainland, the percentage of renters among the elderly indicates they either own their own homes or live with relatives. Of the 20.6% of the elderly who rent, a large number have accommodations in government sponsored elderly housing.

Adult Residential Care Homes (ARCHs) provide accommodations for the elderly and disabled who are ambulatory. Payment is through private sources or through allocation of social security/SSI benefits with state subsidy according to level of care needed by individuals.

- 525 state-wide ARCHs - up to five placements
- 12 state-wide ARCHs - up to eight placements

Long Term Care

Community based services include home delivered meals, personal and chore services, home health care, day centers, hospice care-funded privately or by government.

Institutional care includes skilled nursing (where there is no requirement for 24-hour nursing services), intermediate care (where there is no requirement for 24-hour nursing services) and hospice (for the terminally ill).

Medicare Part A (hospital insurance/HI) pays for hospice care and skilled nursing (usually on a post-operative and post-hospitalization basis) for specified number of days.

Medicaid pays for these same services on a need basis. In addition, Medicaid pays for intermediate care which does not require the same services as those in a skilled nursing facility.

Hawaii has one of the lowest ratios of skilled nursing beds to the general population.

- 41 facilities providing long term care beds are as follows: skilled nursing; intermediate care; skilled nursing/ intermediate care; acute/skilled nursing ("swing beds")
- 3,533 total number of beds
- 1,151 total number of bed being developed
- 35% of beds proprietary
- 39% of beds non-proprietary
- 26% of beds government operated
- 45% of beds are hospital based
- 98% overall occupancy rate

In addition to these long term care beds for the elderly and disabled, there are 254 specialty care beds (psychiatric, tuberculosis, mentally retarded, and others).

Health Care Costs

Health care costs are born privately (business, unions, individuals) and publicly (federal, state, county governments). Private payments come in the form of individually purchased plans; individual responsibility for co-payments and deductibles, premium payments, or non-coverage; taxes on government programs, such as Medicare Part A.

Public payments come from federal government general funds as in the case of Medicare Part B (Medical Insurance/MI); veterans and armed forces health care; public health programs; Native Americans/Hawaiians; etc.

Medicaid is a state/federal government matching entitlement program for the poor. Federal reimbursement is determined by a formula that compares a state's per capita income level with the national average-the Federal Medical Assistance Percentage (FMAP). The FMAP cannot be lower than 50% nor greater than 83%. Under this formula, states with high per capita income receive lower reimbursement than states which have low per capita income.

Hawaii, with high per capita income, received only 50% reimbursement for Fiscal years '94, '95, '96, while Mississippi, with low per capita income, received for the same years reimbursements of 78.85%, 78.58%, and 78.07%, respectively.

- Medicare Part A: 37 million beneficiaries nationwide (4 million disabled)
- Medicare Part B: several thousand fewer than Part A since this is a voluntary program.
- Medicare Parts A & B: 133,000 beneficiaries in Hawaii
- Medicaid: 33 million recipients nationwide
- Medicaid: 156,000 recipients in Hawaii

The Board of Trustees of the Medicare Trust Funds report that in 1995 taxes for Part A were insufficient to cover costs and that if nothing is done, the trust fund balance of $130 billion will be depleted by 2001. It calculates that the present payroll tax of 2.9% would have to be increased to 7.42% immediately to avoid a large deficit anticipated in 2070.

- About half of Medicare costs are incurred during the last 60 days of life and about 40% in the last 30 days, with hospital costs accounting for more than 70% of the expenditures for descendants.
- $271,777,919 spent by Hawaii in FY 95 for nursing home and medical services for the aged, blind and disabled.
- $123,663,876 or 46%, were for nursing home care for 6,821 individuals

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Editor's Note:

Ah Quon McElrath, a retired social worker with ILWU Local 142 which has pioneered in health care for Hawaii's workers and families through collective bargaining and political action, is a member of the Board of Regents of the University of Hawaii. She has also been one of the founders of the Committee on Welfare Concerns, a 10-year old coalition of individuals and representatives of non-profit organization which works with and on behalf of individuals and families who receive public assistance.

Her energy is boundless! She organized an Ad Hoc committee on dealing with Death with Dignity a year ago and is the driving force of this very important group of people. Mahalo Ah Quon.

Cultural Issues in Death and Dying

Kathryn L. Braun DrPH*, Rhea Nichols MSW

Although all of us experience death, not all of us think about death or respond to death the same way. This study begins to explore how cultural traditions, education, and tenure in Hawaii impact views of advanced directives, organ donation, suicide, and euthanasia. This information is useful to physicians who need to engage patients and families in discussions about death and end-of-life decision making.

Introduction

All people have, and will, experience death. But not all people view death or respond to death in the same way. As we increase our life expectancy[1] and our ability to prolong life artificially, issues surrounding death and dying become more controversial. How do different cultures look at death? What factors, besides culture, impact one's perceptions of issues like advanced directives, organ donation, suicide, euthanasia? These questions were asked in a qualitative study of death and dying in Honolulu among five Asian and Pacific Islander (API) groups—Chinese, Filipinos, Japanese, Native Hawaiians, and Vietnamese.

Expanding knowledge of cultural issues in death and dying is important for two major reasons. First, as health care professionals, we need to understand and respect cultural differences if we hope to provide care that is relevant and acceptable to our clients. Second, as educators, we need to encourage individuals to share their differences with each other as our society develops policies and social structures related to end-of-life decision making. This is especially crucial given the recent decisions by the 2nd and 9th Circuit Courts supporting the right to physician-assisted suicide. Although the Supreme Court has issued a stay on these decisions, many feel it is only a matter of time before assisted dying is legalized in the United States.[2-3]

Literature Review

Literature and educational materials on cultural-specific responses to death and dying among API Americans are scarce. Even where literature exists, it most often focuses on Japanese Americans and show generational differences in response to death, with *issei* (first generation) respondents more likely to practice customs and traditions of Japan compared to *sansei* (third generation) and *yonsei* (fourth generation).[4-5] Students of traditional Chinese culture have reported that Chinese are often hesitant to talk about death, as this is considered bad luck.[6] Other reports describe the importance of funeral rituals in Chinese culture, from determining the right day of burial, to burning paper money to send with the deceased on his/her journey.[6-7] If a person is buried without strict adherence to proper funeral rites, a hungry ghost may return to plague the living.[8] The carrying-out of traditional death rituals is considered the most important act of filial piety among Vietnamese, from the rite of feeding the deceased to the rite of reburial, where bones of the deceased are collected, washed and preserved in a sacred jar for reburial.[9] Ancestor worship is also important, and many Vietnamese Americans tend ancestral altars at home.[9-10] Very little literature appears about Filipino Americans. Several cross-cultural studies of suicide, however, suggest that suicide rates among Chinese, Japanese, Filipino, and Vietnamese Americans are lower than suicide rates of Caucasian Americans and lower than those of their compatriots at home.[11-12]

In summary, while some information is available about traditional death rituals, literature on how these traditions are practiced in the U.S. and on views of suicide, euthanasia, advanced directives, and organ donation is limited. This study begins to fill the gap by presenting information from interviews on death and dying practices with five Asian American and Pacific Islander groups in Hawaii—Chinese, Filipinos, Japanese, Native Hawaiians, and Vietnamese.

Method

Data were gathered from July 1995 to February 1996 through in-depth interviews with individuals of Chinese, Filipino, Japanese, Native Hawaiian, and Vietnamese descent. From each of the ethnic groups studied, two key informants (a religious leader and a bilingual health/social service professional) and five to eight focus group participants were interviewed. Key informants were selected because of their level of knowledge about their community's practices in this area; they were generally older adults who were well educated, bilingual, and respected by their communities as experts. Focus group members were identified by key informants and were affiliated with the religious and/or social service groups represented by the key informants. Because focus group members in the Chinese, Filipino, and Vietnamese groups were first-generation immigrants to the U.S., many were interviewed with the assistance of bilingual students.

The study's interview questions explored six broad areas including: 1) the underlying philosophy/religion influencing death and dying in the culture; 2) burial, memorial services, and bereavement; 3) suicide and euthanasia; 4) advanced directives and organ donation; 5) how beliefs/practices have changed over time; and 6) advice for health care professionals working with dying patients from the culture. Transcripts of the interviews were analyzed for common

Address reprint requests to:
* Kathryn L. Braun, DrPH
Associate Professor of
Public Health and Director
Center on Aging
University of Hawaii
1960 East-West Road
Honolulu, HI 96822
(808) 956-5768
Fax (808) 956-9582
email kbraun@hawaii.edu

and differentiating themes. An initial draft of the summary of findings for each group was sent to one or more of the key informants, who were asked to provide corrections and/or to validate that the information contained therein was accurate to the best of their knowledge.

The study identified a number of differences among and within the ethnic groups, a full description of which is provided elsewhere.[13] The current paper presents information from the study that is relevant to the more controversial aspects of death and dying—advanced directives (e.g., will, living wills, and documents giving power of attorney for health care decisions), organ donation, suicide, and euthanasia (e.g., withholding treatment, withdrawing treatment, and aiding death).

Findings

Historical Background of the Five Ethnic Groups

The Native Hawaiian people (or *kanaka maoli*) are indigenous to the islands of Hawaii, establishing their arrival as early as 100 A.D. They are of Polynesian extraction, sharing a common ancestry with the indigenous people across the South Pacific. Following contact with the West, the native population was reduced drastically as Native Hawaiians contracted and died from newly imported infectious diseases. This loss of cheap labor led to the "importation" of labor from Asia and this, in turn, helped contribute to the erosion of Native Hawaiian traditions and customs. Since the 1960s, the state has seen an increased appreciation of Hawaiian heritage and a resurgence of the traditional language and cultural traditions. In 1990, Native Hawaiians comprised about 19 percent of the state's population.[14-15]

The Chinese were the first of the Asian groups to immigrate to Hawaii in significant numbers, arriving in the mid-to-late-1800s to work on sugar plantations. Fears about loss of jobs for Caucasians stimulated a series of laws that substantially reduced Chinese immigration, including the Chinese Exclusion Act of 1882 and the Oriental Exclusion Act of 1924. Immigration restrictions began to relax in the 1940s, in part to recognize China's position as a U.S. ally in World War II. Since the Immigration Act of 1965, which allowed 20,000 immigrants per year per country, Chinese immigration from Taiwan, mainland China, and Hong Kong has greatly increased. In 1990, about 6 percent of Hawaii's population was Chinese.[14,16-17]

The first major wave of Japanese immigration started after the Chinese Exclusion Act of 1882 when Hawaii sugar plantations looked to Japan for a new source of cheap labor. Almost 150,000 Japanese came to Hawaii between 1882 and 1908, when the Gentlemen's Agreement restricted immigration from Japan to wives of Japanese men already in the U.S. All Japanese immigration was effectively halted in 1924 with the Oriental Exclusion Act. It restarted in the 1950s with the immigration of Japanese wives of U.S. servicemen. Although the Immigration Act of 1965 allowed 20,000 per country to immigrate to the U.S., fewer than 5,000 Japanese nationals have chosen to immigrate each year. Today, two-thirds of all Japanese Americans are U.S. born, compared to about 37% of all API Americans, and about half marry non-Japanese. In 1990, about 23 percent of the state's population was Japanese.[14, 18]

Filipino immigration began following U.S. victory over Spain in 1892, at which time the Philippines was ceded to the U.S. As a U.S. territory, Filipinos were considered U.S. nationals and, therefore, immigration was unrestricted. Almost 120,000 Filipinos came to work on Hawaii sugar plantations between 1906 and 1934. Immigration was severely curtailed in 1935, when the Philippines was granted commonwealth status. But with the Immigration Act of 1965, Filipino immigration accelerated and, in 1990, Filipinos comprised about 15% of the state's population.[14, 19-20]

The Vietnamese are among our most recent immigrant groups, first arriving in the U.S. after the fall of Saigon to the Vietnamese Communists in 1975. A second group, called "boat people," are those who fled Communist rule on foot or boat, often spending time in refugee camps before relocation. Established in the early 1980s, Vietnam's Orderly Departure Program allowed controlled immigration directly from Vietnam for political prisoners, Amer-Asians, and those whose family members were already U.S. citizens. The 1990 Census estimated the Vietnamese population in the U.S. at 614,547, a 134% increase over 1980. Vietnamese comprise less than 1% of the Hawaii's population.[14, 21]

Traditional Beliefs about Death

Native Hawaiian beliefs about death and dying are influenced by both Native Hawaiian traditions and Christianity. A focus group member explained that death is accepted as a part of life by most Native Hawaiians, who see an "openness" between this life and the next. For example, a participant explained that when we complete our tasks on earth, it is time to die and "move on to the next realm." Others believed that, upon death, people are reunited with loved ones who have died before. We heard several stories about communication between realms, e.g., either dreaming about or seeing signs about the deceased. We also heard that touching a dead body may make you sick, as the dead body is "empty and can take the living person's *mana*."

Chinese participants reported that their traditions are influenced by three religions—Confucianism, Taoism, and Buddhism. In Confucianism, it is believed that the body should be preserved in order to respect one's parents, and that ancestor worship is very important. In Taoism, longevity is emphasized and stimulates discussions about the right foods to eat in order to maintain health and obtain long life. The Buddhist religion teaches that one must be good in the present life in order to be reincarnated on a higher level in the next life. A premature death is considered bad luck, as this is thought to mean that someone has done something bad and is being punished. To prevent this, one should avoid offending anyone, treat parents with respect (filial piety), and take care of the older generation in this life.

Vietnamese Buddhist beliefs are similar to traditional Chinese beliefs, as China dominated Vietnam for many centuries. The concept of karma is important. While death is the final destruction of the body, the soul remains and is reborn; but how a person is reborn depends on his/her actions. If a person dies a terrible death (through accident or illness), it is because he/she is being punished for bad behavior in this life or a past life. A child may die because he/she is paying for a misdeed in a past life or for a misdeed of someone else in the family. If a child commits a crime, a parent may have to pay for it in his next life. Many children are very good so that their parents will have a good next life. The goal is to be reborn as a person without karmic debts and then to continue achieving a higher level of rebirth. You can tell when someone has been reborn at a higher level because they are "good-looking and live a comfortable life." While Buddhism is the dominant religion, a number of Vietnamese in the U.S. are Catholic, a remnant of an 80-year occupation by the French.

Japanese Buddhist participants said that death is a part of the natural process of life and is not a finality. In fact, the present world is painful and unsatisfactory because of the worldly attachments people have to it. The next world is a better place because people are relieved of those attachments and there is peace. It is felt that when

a person who has faithfully listened to the teachings of the Buddha dies, his/her soul can be reborn into this better place, sometimes called the Pure Land. There is a belief in Buddhism that the last thoughts of a person before his or her death determines the rebirth. If one is confused or angry at the time of death, one's soul would likely be reborn in a different (worse) state than if this person had died peacefully. Despite the belief that karma affects life events, study participants said that personal karma is not openly discussed and that it is not appropriate to say, "you must accept it because it is your karma." Along with personal karma, there is also a collective karma over which there is no control (hurricanes, typhoons, war, etc.). We also heard that many Japanese in Hawaii left Buddhism following Japan's bombing of Pearl Harbor in World War II, as Japanese Buddhist ministers (and others in leadership positions) were sent to internment camps. Some Japanese Americans became Christians at this time and others stopped participating in organized religion altogether.

Our Filipino informants said that the Catholic religion had an important influence on death and dying in Filipino culture. This is not surprising given that the vast majority of Filipinos are Catholic as a result of 330 years of Spanish rule. In Catholicism, there is no need to fear death "because the Lord has created us and will be the one to take our lives back. If a person is worthy, and has followed the doctrines of the Lord, he/she will go to heaven after death. Sinners will go to hell or purgatory."

Advance Directives

Native Hawaiian participants agreed that few Native Hawaiians talk about wills or living wills. A reason was that the property automatically goes to the spouse and then to the children, so there was not need for a will. We heard that some members of the older generation may believe that talking about death will bring on death. Participants in research, however, said that they knew many Native Hawaiians who do make their wishes concerning death known to their loved ones. For example, a participant had already told her family about the kind of funeral she wants when she dies, including the foods to be served.

Chinese participants noted that Chinese people have traditionally thought it was bad luck to talk about death. Recent immigrants noted that living wills are not promoted in Hong Kong or in mainland China. The younger generation of Chinese in Asia and the U.S., along with the long-time U.S. residents, are more Westernized and more open to advanced planning. In addition, we heard that Chinese become very interested in living wills once they have witnessed our ability to prolong life. For example, a participant stated that, as a result of her grandfather lingering in a coma for 4 years, both of her parents decided to get living wills. Although participants were generally in favor of living wills, and believed that the best time to complete them was when a person was young and healthy, few had them.

Among Japanese Buddhist participants, there was a general consensus that planning for death was a good idea. For Buddhists, we heard, "if you don't think about death, you cannot live." On the practical side, participants thought that most Japanese Americans saw the usefulness of advanced directives and many had already executed such documents, although the Buddhist temple does not yet have a specific stand on advanced directives.

Among the Filipino participants, the most educated (including a Catholic nun) had thought about and/or executed living wills and funeral plans. Others, who were linked with social service agencies, remembered a lecture by an attorney who helped many of them complete living wills. However, the newer immigrants and those with the least education were quiet on the subject, finally saying that "Filipinos don't like to talk about death or funerals; at the most, they may have picked a cemetery plot." The youngest focus group member said that she had discussed life support with her father, who told her he would not want to be sustained by machines. However, she has been unable to get him to put these wishes in the form of a living will.

Very few of the Vietnamese participants were familiar with living wills or with giving power of attorney. In response to this question, we heard that "in planning for death, people pray a lot" and that people should put aside money to cover funeral expenses. Another participant thought it was a good idea to prepare a will dispensing property.

Organ Donation

Native Hawaiian participants had varying feelings about organ donation. One was in favor of it and had designated so on her driver's license. Another said she would not donate her organs, nor would any of her family, because she believed that God made her body and she should leave this world with her body as it is. The others said they were unsure about donating organs, although they recognized the merit in it.

Chinese participants said that resistance to organ donation stems from the desire to die intact and from the Confucian belief that one's organs are gifts from one's parents and that it would be disrespectful to destroy them or give them away. There was also some concern that people who receive donated organs may be reborn with the donor's face. Of the participants, one reported carrying a donor card and two others were supportive of organ donation but had not taken any action to indicate so. Another said that it "gives me a creepy feeling to think that someone would cut me up" so he was against it. One doubted whether doctors who needed kidneys for another patient would treat the donor's disease or injury aggressively. The remaining Chinese participants were unsure.

Few Vietnamese informants were in favor of organ donation as they did not want to be born into the next life missing an organ. One said it was unsanitary and another thought that it was scary. According to the Buddhist reverend we interviewed, Buddhism makes no direct reference to organ donation so it is not known if organ donation is an acceptable practice. Theoretically, it would be a good idea since in death, the body means nothing (only the soul is reborn) and organ donation may help another. Although the reverend thought that donating organs to help others was a "wonderful idea," he thought that few in his congregation would consider it.

Among the Japanese Buddhists, resistance to organ donation stems from the hesitance to deface one's body, which is a sacred gift from the ancestors. It was also believed that you "have to go whole." Again it was noted that Buddhist thinking would support organ donation, as only the soul is reborn and it would be good to help others by donating organs. Participants, however, said that the topic was not openly discussed. They were willing to discuss it with us and one participant changed her mind in favor of organ donation when she learned that no one would be able to see any difference in her body at the mortuary after the organ was removed (i.e., the body would look intact).

The Filipino participants also gave a variety of responses. Theoretically, helping others by donating an organ would be good and, if only the soul goes to heaven, why not give body parts to the living who are in need. In reality, few of the first generation Filipino Americans had considered the idea or were open it. The more educated participants and the second generation participants had thought about organ donation and were willing to consider the idea, although none were official organ donors.

Suicide

Among the Filipino participants, there was consensus among participants that suicide is not acceptable as it goes against the Fifth Commandment: Thou shall not kill. If a person commits suicide, the priest may refuse to perform a funeral service and may not allow the body to be buried in the Catholic cemetery. Focus group participants made these comments: "You don't go to heaven if you commit suicide," "you are not forgiven," and "you are a sinner." The single Protestant Filipino participant reported that her church would allow a service to be performed for someone who committed suicide, as they believe that Jesus forgives this person.

The Native Hawaiian participants said that if someone commits suicide, it's often the fault of someone else who has rejected them or hurt them in some way. Most felt that those who commit suicide should be given a church burial and felt it was harsh of the Catholic Church to not allow those who commit suicide a Catholic funeral or interment.

Chinese participants reported that suicide is considered wrong among Chinese. In traditional Chinese culture, however, suicide may have been acceptable for females who were raped or wanted to avoid being raped and people captured by enemies during war. In fact, a woman who commits suicide because of being raped may return as a hungry ghost to haunt the person who raped her. While the burial service would be the same, the family of a person who has committed suicide would attempt to cover up the suicide because of shame, and they would likely mourn privately.

Vietnamese participants told us that Buddhist teaching equates suicide with killing. Most Vietnamese think that suicide is wrong and teach this to their children at a very young age. The only exception is in war; a military man who commit suicide instead of surrendering to the enemy will go to "a higher place in the after life." However, most go to Suicide Land and are very unhappy since they have not paid back their karma and it will follow them. For example, the soul of a person who commits suicide at age 30, but was supposed to live until age 80, will live in Suicide Land for the next 50 years to make up the difference. The unhappy ghost of the person who commits suicide may also return to bother the living. The funeral is the same for a person who commits suicide, but mourners feel more sorrow for the surviving family members.

Japanese informants concluded that there are two ways to look at suicide. One is that a person was bestowed life by parents and ancestors, and should take care of it so as not to hurt the ancestors. In addition, the taking of any life is wrong, even one's own. But, although suicide "is not good," sometimes it is the only way out of a bad situation. In the Buddhist belief, it doesn't matter how a person dies because the Buddha is compassionate and embraces all beings without discrimination and the funeral service is the same, regardless. Thus, participants felt it was best to take a compassionate and non-judgmental view of suicide.

Euthanasia

Few of the recent Filipino immigrants had any experience with passive or active euthanasia and were not even that familiar with the terms. When terms were defined, participants felt that hastening death would be wrong because it resulted in killing, which is against the Fifth Commandment. Again, those who were more educated and those who had worked with aged and terminally ill patients, agreed that "allowing death to come" by withholding life support or increasing pain medication was acceptable. They were not in favor of more active measures or assisted suicide, however.

The Vietnamese participants told us that euthanasia is not acceptable because killing is immoral and because people have their own karma to fulfill. Therefore, families would probably not allow the life of a family member to be shortened, even if the suffering was great. The exception seemed to be if the dying person was in an institution that the family couldn't afford. In this case, the hastening of death may be allowed, but this was not something the family could openly discuss. A participant explained that, in this case, if life support was removed and the person died, then it would signify that it was time for that person to go. Several stated that they themselves would not want to be kept alive on life support.

Among the Chinese participants, there was a general consensus that disconnecting tubes or providing an overdose of pain medicine to end suffering of a loved one was acceptable to most Chinese Americans. Participants would expect careful control and extensive discussion before supporting any activity that may cause death. They would also want some assurance that this was within the person's wishes and would hope to see such a wish in writing. A focus group member noted that, given the importance of filial piety, it would be difficult for children to remove life support from the parents as relatives may say, "oh, how come you can do this to your parents?"

From Japanese participants, we heard that there was no Buddhist stand on euthanasia but that the Buddhist temple would support the family's decision in relation to the withholding or withdrawal of life support. We heard the Japanese word *akirameru* which means "to leave things as they are." That is, instead of using technological means to sustain life, people could allow loved ones to die naturally.

All of the Native Hawaiian participants were in favor of passive euthanasia. One stated that, "for me personally, I tell my family to make sure they do all they can to save me, but then let me go and I won't come back and bother you guys." Another said that, in her family, they have all decided they will allow the person to "leave" and not keep them on artificial support. They felt that machines just extend death and, as a result, the spirit is stuck half-way in between this realm and the next. At this point, it was "better to allow them to go."

Discussion

Findings from this cross-cultural study of responses to death and dying revealed similarities and differences among the five ethnic groups. An important similarity was the participants' willingness to discuss their experiences with death, despite our expectations of reluctance. Given this, physicians and other health care professionals should be less hesitant to broach the subject with their patients.

The differences among groups, however, were also apparent. Although the Japanese, Chinese, and Vietnamese groups share a Buddhist history, they varied in their views of karma and suicide. For example, in Japanese Buddhist culture, personal karma is not openly discussed, nor are misfortunes attributed to a person's past karma. In Vietnamese and Chinese cultures, accidents, illnesses, and premature death are often considered a result of a person's misdeeds in a past life. Suicide was considered unacceptable by Vietnamese and Chinese groups and a mortal sin by Catholics, whereas the Japanese Buddhist group thought suicide should be viewed in a compassionate, non-judgmental manner.

Within-group differences were also observed, based on length of time in the U.S. and level of education. For example, beliefs among our Chinese American informants differed depending on if they were third and fourth generation Chinese Americans who grew up Christian, new immigrants who were young and Christian, and new immigrants who were older and Buddhist/Confucian. Among the Vietnamese and Filipinos, differences were seen between the more educated key informants and the less educated focus group members. In general, although the traditions of the native culture are known and respected, those who were more educated and acculturated

ated were more likely to have thought about living wills, organ donation, and euthanasia.

Of interest as well is the concept of using the values inherent in the different cultures as a base for education about death-related issues. For example, Buddhism and Catholicism both emphasize the importance of "giving" and "helping others." They also believe that it is the soul, not the body, that "is reborn" or "goes to heaven." Can these concepts be incorporated into educational strategies that will increase their willingness to become organ donors? Similarly, the Buddhist concept of *akirameru* could be incorporated into discussions about euthanasia. On the other hand, proponents of physician-assisted suicide may want to change their terminology (perhaps to "assisted dying") as suicide had such negative connotations for our Chinese, Filipino, and Vietnamese respondents. Findings along this line point out the sensibility of centering discussions about such controversial issues as physician-assisted suicide within churches, as they play an important role in explaining and celebrating life (and death) events.

Financial concerns also emerged as a trigger for changing attitudes toward euthanasia. Several informants in the Vietnamese and Chinese groups mentioned that "pulling the plug on a family member who had no hope of recovery" may be justified if the family could not afford to pay for prolonged life support. The economic argument is powerful and will become more impressive as federal insurance benefits are reduced and individual out-of-pocket expenses increase.

Methodologically, the study was constrained by a small sample, limited to a few key informants and a handful of focus group participants for each ethnic group. Thus, findings from this work cannot be generalized to the larger population. Future studies are indicated and interviews should include larger and more representative samples from each group. It would also be important to ask more detailed questions about physician-assisted suicide.

Given the shortage of existing literature on cultural differences in death and dying practices, this study provides a modest amount of information on the thoughts of five different ethnic groups on the more controversial aspects of death and dying—advanced directives, organ donation, suicide, and euthanasia. The findings also suggest that customs are affected by a number of factors—years in the U.S., educational attainment, economics, religion—and are changing rapidly. Thus, the importance of the study lies less in the cultural details provided by the participants and more in the fact that differences exist and need to be assessed and respected. The study also provides insight into cultural traditions that could be incorporated into educational efforts about end-of-life decision making and the anticipated legalization of physician-assisted suicide.

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An Attitudinal Survey of Euthanasia in Windward Oahu

A Cross-Sectional Pilot Study of Four Age Groups

Timothy Littlejohn* and Jeanne Burrows-Johnson**

Exploring the attitudes of 185 respondents toward euthanasia, this 1990 cross-sectional pilot study utilized 12 survey questions addressing participants' demographic profiles and 18 focusing on: abortion; capital punishment; euthanasia; sterilization; and suicide. Cross-tabulation of structural, behavioral and attitudinal variables revealed age and education were the key factors in this study's finding that the greater a person's life experience, the more favorable one's attitude toward euthanasia.

To the ancient Greeks, "euthanasia," meant to die easily or happily, with dignity. Today it is generally defined as the voluntary termination of one's life,[1] or more particularly, putting to death painlessly or allowing to die those who suffer from an incurable disease or condition.[2] Benign as these descriptions may seem to some, the issue of euthanasia, like abortion and capital punishment is controversial and poses an ongoing struggle legally, morally and spiritually.[3] Even complex categorization through qualifying terms like "active," "passive," "voluntary" and "involuntary," do little to unite views on this explosive subject.[4]

The significance of this social concern is evidenced in the attention the subject draws in broadcast and print media. In addition to highly visible cases such as Dr Jack Kevorkian, periodicals throughout the U.S. are exploring myriad aspects of this controversial issue.[5] The range of emotional responses expressed by proponents and opponents, indicates that euthanasia can be a key element in studying societal attitudes toward aging, death and dying.

Given current levels of life expectancy, people of all demographic characteristics are facing choices in life-sustaining medical treatment for themselves and their loved ones. The search for individual and collective answers has led to in-depth examination of examples of past social acceptance of both active and passive euthanasia.[6]

* Master of Arts
Library and Information Science
University of Hawaii at Manoa
** Bachelor of Arts in History,
University of Hawaii at Manoa

Historical Context

In ancient Greek society, euthanasia was a standard practice, particularly among the elderly. Aged individuals, feeling they were no longer beneficial to society, might gather for one last celebration and then drink hemlock.[7] At the other end of life's spectrum, newborn babies were routinely examined to determine their physical worthiness. If a flaw was found, or the parents were judged to be inferior themselves, the child was killed in order to keep society free from potentially weak and non-contributing individuals.

Euthanasia was also practiced within some Native American cultures, such as the Inuit, Plains Indians and the Apache. Within these groups, the infirm and aged were sometimes left to die when they were too weak to care for themselves, or could no longer tangibly contribute to their society.[8]

In modern American society, however, high value is placed on extending one's life as long as possible. The reasoning is that all human life is valuable and meaningful. Such a focus has led to a medical technology dedicated to sustaining physical life regardless of the expense or suffering involved. In view of today's rising medical costs, (and the insurance necessary to pay for it) many segments of the private and public sectors are now considering various factors involved with aging and death.[9]

A study of 1200 health care workers showed visible attitudes regarding the subject, with more than 65% of its respondents being anti-euthanasia and 35% being pro-euthanasia. Of the 65% against euthanasia, most were nurses' aides and licensed practical nurses. The 35% favoring euthanasia were primarily doctors and registered nurses. The difference in attitudes shown by these results indicate that education and experience do appear to be factors in participant conclusions.[10]

Several anthropological and sociological studies address euthanasia within broader contexts. A study of a 163-member Xhosa-speaking African tribe explored thoughts about death and dying.[11] Respondents expressing the least fear of death were both older and less educated respondents; for it was the younger people who had the greater opportunity for education. Thus it was not possible, in this sample, to separate the effects of age and education from the reactions to fear of death or euthanasia.

In Columbia, Missouri, a study of abortion,[12] shows comparisons between 232 members of the Missouri Citizens for Life (MCL) and 282 members of the Abortions Rights Alliance (ARA). Members of the ARA were more inclined to favor equality of the sexes, especially in their approval of the Equal Rights Amendment. They were more politically liberal and more committed to free speech for social deviants. MCL members were much more conservative in their approach to matters of personal morality and regarded suicide and euthanasia as more objectionable than did their ARA counterparts.

In a 1987 study of abortion, researchers demonstrated that education has a significant effect in the polarization of attitudes.[13] In this case, the greater a group's education, the greater their likelihood of consistently approving of legalized abortion. Adults with a grade school education were the least likely to consistently approve of legalized abortion, while college graduates were the most likely to consistently approve.

Hawaii Living Will Legislation

In Hawaii an initial living will law was passed in 1986.[14] Following years of reconceptualization and debate, the revised statute contained the following elements:

1. A clear statement of the conditions under which life-sustaining medical treatment can be withdrawn. Unique among U.S. state laws, Hawaii permits advance directives from both terminal patients and those who have permanently lost the ability to communicate medical treatment decisions to their physicians.
2. A living will model that may be amended to individual preferences, providing the signer includes a specific check-off stating whether the person making the living will wants to have their life prolonged by tube or other artificial feeding or fluids.
3. Unlike more stringent laws in other states, Act 321 allows verbal or anecdotal evidence as well as written living wills.[15]

This legislative revision resulted from a coalition of legislative, legal and medical authorities concerned with imprecision in the original statute.[16] Expected negative response from Right-to-Life-Movement advocates, was overwhelmed by the oral and written testimony of governmental and professional organizations voicing support of this Act, including: American Civil Liberties Union of Hawaii; the Roman Catholic Diocese of Honolulu; the Hawaii Federation of Physicians & Dentists; Hawaii Health Care Association; Hawaii Long-Term Care Association; Hawaii Medical Association; Hawaii State Department of Health. [17]

In 1992, the effectiveness of the Living Will Law in Hawaii was further strengthened by passage of an act providing for the Durable Power of Attorney for Health Care Decisions.[18] As an amendment to the 1989 Durable Power of Attorney Act, this law allows a person to appoint someone to make health decisions for them, if their own decisions cannot be determined. Documents combining the language of a living will and a durable power of attorney for health care are now routinely provided by attorneys in the State of Hawaii.

Attorney Jeff Crabtree was a key proponent of these statutory amendments. He was propelled to an activist position by the experience of his mother who became comatose following an accident in 1986.[19] With initial controversy within the family, and the ambiguous position of the 1986 law, Crabtree faced constructing a legally-acceptable argument for obtaining suspension of all life support aids to his mother.[20]

Even with the eventual agreement by all family members, the process was arduous and expensive. Finally, after four and a half years, the State of Hawaii ruled that the mechanical life support systems could be disconnected and she would be allowed to die with dignity.[21]

Focus

As of 1991, little national attention had been focused solely on euthanasia. The primary study to focus solely on attitudes regarding euthanasia was designed and administered in 1977 by sociologists David Jorgenson and Ron Neubecker.[22] In their four-point response measurement they found that of the 1525 people surveyed, 50% were opposed to euthanasia. Seventy percent of white males were pro-euthanasia, contrasted to blacks and females who tended to be against euthanasia. The highest income group was also shown to be pro-euthanasia, as were those with the most seniority and education.

The latter two variables were the focus of the design and implementation of this sampling of societal views toward euthanasia. It compares attitudinal differences among: high school; college; working; and, retired persons. Specifically, this study sought to find whether the variables of age and education were measurably significant. It is hypothesized that life experience, as measured through age and education, tends to reflect a person's stand on euthanasia, with the older and more educated tending to reflect a more neutral or pro-euthanasia attitude.

Method

This cross-sectional study of four age groups sampled on the windward side of Oahu, Hawaii explores attitudes toward euthanasia with a 30-question survey of 185 people. The first 12 questions addressed the demographic profile of respondents. The remaining 18 questions focused on views of health and life including abortion, capital punishment, euthanasia, societal imposition of sterilization, and suicide.

Five areas of the opinion survey delineate the pro-euthanasia and the anti-euthanasia groups. The hypothesis is: The greater a person's life experience is (based on age and education), the more favorable will be his or her attitudes toward euthanasia. Structural, behavioral and attitudinal variables were cross-tabulated to measure the relationship between these variables.

Analysis of results concluded variables of religious and political affiliation and activism are not significant determinants of respondents' overall reaction to the concept of euthanasia. Age and education are found to be the two key relevant variables in this study.

Sample

The data base for this research draws on a total sample of 185 people in four research subgroups: students at James B. Castle High School; students of the University of Hawaii at Windward Community College; working adults; and residents of Pohai Nani Good Samaritan Kauhale, a retirement community.[23]

Measurement of Euthanasia Attitudinal Variables

Euthanasia is often discussed in terms of the degree of active or passive involvement. The purpose of this study was to measure the overall reaction of respondents to the term itself. Except for consideration of self-induced death, suicide, neither qualification nor in-depth description were employed. This study focuses on respondents' agreement with five general conditions asking whether:

1. Euthanasia (mercy killing) should legalized.
2. Helping a terminally-ill loved one commit suicide is wrong.
3. Doctors should be allowed to end the life of a terminally ill patient upon request by the patient and his or her family.
4. A patient's life may be terminated if a court-appointed board determines the patient cannot be cured.
5. Euthanasia is wrong.

Independent Variables

Thirty variables were selected for this cross-sectional study of euthanasia of which 12 were structural and behavioral and 18 were attitude related. Structural variables included age, gender, place of

birth, number of years lived in Hawaii, ethnicity, education, occupation, and income. Behavioral variables were: mental outlook on life; political association; frequency of voting; religious affiliation; and, frequency of religious involvement.

Analysis

Response distributions were compared between groups utilizing the chi-square. In addition, mean scores were then compared between groups using Analysis of Variance. Each subject was given a score, coded from 0 to 4, with 0 being the most negative and 4 being the most positive. The Statistical Analysis System [SAS] program was used for statistical analysis.

Results

Condition 1 [overall probability of <0.01 to 0.57]. Legalization of euthanasia was favored by 56.2% of the entire sample of 185 individuals. 17.8% were opposed and 23.2% remained neutral. As noted throughout the study, receptiveness to euthanasia by high school students was notably low. Only 24% supported legalization, 42% remained neutral and 32% were negative to the idea.

Condition 2 [overall probability of <0.01 to 0.74]. This question drew a more positive response, asking if helping a terminally-ill loved one to commit suicide is acceptable. Of the total sample, 64.3% favored this proposal, 16.2% found it unacceptable, and slightly more (18.4%) remained neutral to the issue. Measurement of the 47 college students reaction to the subject of such mercy killing was slightly less positive: 57.9% were pro-euthanasia; 19.6% were anti-euthanasia; and 24.4% were neutral.

High school students were also more positive in answering this question, but were nevertheless half as supportive as retirees. High school students responded with 38.8% in favor, 43.1% remaining neutral, and only 17.6% in opposition. In contrast, retirees, supported the question by 71.8%, with 23.1% in opposition and 5.1% being neutral.

Condition 3 [overall probability of <0.01 to 0.70]. Overwhelming support was given the permissibility of doctors ending the life of a terminally-ill patient upon request by the patient and his or her family. 80.5% of the total sample were pro-euthanasia, 10.8% stated their opposition and only 5.4% of the respondents were neutral. The strongest support came from working adults, with a response of 91.5% positive, and 6.4% negative. It is interesting that none of this subgroup remained neutral on this question. While overall positive in their response, high school students were again notably less positive (60.7%) than other age groups in this study.

Condition 4 [overall probability of <0.01 to 0.68]. Asking whether a patient's life may be terminated if a court-appointed board determines the patient cannot be cured, this issue drew the least support with only 37.7% of the sample responding favorably. The greatest sanction came from retirees (60.5% in favor, 26.3% opposed, 13.1% neutral). High school students were again markedly less enthusiastic (28.4% positive, 35.2% neutral, 35.3% negative). College students were even less supportive than high school students (17.1% in favor, 55.4% in opposition and 27.7% neutrally positioned). Working adults straddled the middle, with 44.7% favoring the question, 38.3% being opposed and 17% remaining neutral.

Condition 5 [overall probability of <0.01 to 0.67]. Addressing the overall acceptability of euthanasia, this condition received the greatest support from working adults (76.6% in favor, 14.9% opposed and only 8.5% neutral). A higher percentage of high school students remained neutral on the issue, with 32.6% favoring euthanasia and 24.5% being opposed. This compares with an overall approval rating of 66.7% by the other three subgroups and only 16.3% opposing the concept.

Summary

Retirees were the only subgroup consistently supportive of all conditions, including the least-favored Condition 4. The mean of their positive response to the five conditions was 70%. Only Condition 3, permitting physicians to terminate life, upon request by patient and family, drew positive support from high school students (60.7%).

The most pro-euthanasia age group were working age adults, 23 to 29 years old. Their overall agreement was 78.5% The least supportive respondents were under the age of 18. This subgroup's overall agreement with the issue of mercy killing was only 37.2%. With 46.7% support, young adults 18 to 22 years old were also less than positive about the subject.

In considering the variable of education, the most pro-euthanasia persons had attained a doctoral degree or its equivalent. None of this educational subgroup remained neutral on the issue of euthanasia. Their overall agreement with the concept of euthanasia was 80%. The remaining 20% were consistently negative in their overall response.

As the statistical analysis revealed in the mean scores, none of the five attitudinal conditions drew a level of significance. However, examination of percentages indicates that younger and less educated respondents tended to be less receptive to a pro-euthanasia stance as measured through each of the five conditions.

Discussion

The purpose of this research paper was to identify those variables most closely related to attitudes toward euthanasia in Windward Oahu. Structural, behavioral and attitudinal variables were chosen and cross-tabulated to see whether age and education were factors affecting euthanasia attitudes.

Comparison of the makeup of the total sample of this survey and that of the citizenry of the State of Hawaii demonstrates a degree of likeness. At the time this sample was taken, the median age was 31.9 years with the ratio between males and females roughly 1 to 1 (with 50.9% males and 49.1% females). The racial makeup of Hawaii was: Asian, 46.6%; Caucasian, 34.4%; and Polynesian, 13.9%. The State's religious affiliation includes: Catholicism, 65.1%; Mormonism, 13.3%; traditional Protestantism, 10.7%; fundamental Protestantism, 7.9%; and Buddhism, 3.1%. Unfortunately, measurement of political affiliation was not provided in the State's statistical analysis.[24]

The median age for participants in this study was 18 years, with a quarter of this sample being high school seniors. This sample includes a lesser proportion of males (35.2%) compared to females (59.4%). This deviation from the State's average in gender, may be explained by the inclusion of 25% retired people, who generally include a higher percentage of females. When examining the gender breakdown between proponents and opponents of euthanasia, some variation is noticeable. For while those supporting euthanasia closely parallel the overall study, (57.7% being female and 36.5% being male), respondents opposing euthanasia included 76.9% women and 23.1% men.

Like the overall ethnicity of the State of Hawaii, this study's participants are not an ethnically homogeneous group. Caucasians made up 44.9% of the sample, or roughly 10% more than the State's ethnicity. Asians were underrepresented with only 20.4%, or less than half the state average. Polynesians were strongly represented at 24.1%. The ethnicity of pro- and anti-euthanasia respondents

reflected a similar broad spectrum.

Although one might expect religiosity to be a deciding factor in determining an individual's perception of the issue (as in the Jorgenson, Neubecker survey), the present study finds no such relationship. Respondents supporting euthanasia were as dedicated in their religious devotion as those of the opposite view and represented a wide spectrum of religious affiliation. The sample included traditional Protestants (28%), Buddhists (17.8%), fundamentalist Protestants (4.9%), Mormons (3.2%), and Catholics (2.4%).

Participants with both positive and negative views of mercy killing expressed generally liberal political beliefs. Of those supporting euthanasia, 36.5% described themselves as Democrats, 23.1% as Independents and 21.2% as Republicans. Respondents opposing euthanasia included 38.4% Democrats, 37% Independents and 15.4% who were non-affiliated. It is interesting to note that there were no Republicans among opponents of euthanasia.

As demonstrated in the results section of this study, life experience, as measured through age and education, does contribute to a more accepting view of euthanasia. Looking at the frequency of distribution of demographic characteristics of proponents and opponents of euthanasia, only measurements of age and education were noteworthy.

The sample of 51 Castle High School senior English students were the least positive toward the subject, with over a third indicating an anti-euthanasia view, and even more remaining neutral. Aside from age and education, the high schoolers deviated from their counterparts in few respects. They represented similar proportions of gender, race, religiosity and political orientation. The one noteworthy aspect of this group's self description was their incomplete reporting of family income which may be reflective of the students' lack of involvement in family finances.

The second group of 47 students at Windward Community College, were primarily in their first-year of college and therefore close in age to the first group. Yet they were more accepting in their overall response to the subject of mercy killing than the high school students. Nearly two-thirds of them indicated pro-euthanasia attitudes; one-fifth were anti-euthanasia; and only a quarter stayed neutral. Reporting of income was also incomplete and again may be attributed to non-involvement with family finances.

The sample of 47 working adults, from Castle High School and the general Windward Oahu community, was the most supportive of the concept of euthanasia. Over three quarters of these people were in favor of it, while less than one-fifth were in opposition and considerably less than a tenth expressed neutrality. These working adults differed from high school and college students in two meaningful ways; they were older, and had completed higher levels of education. Unlike their younger and less educated counterparts, it is likely they had had more experience with myriad life factors, including death and dying.

Occupation may be seen as another outstanding feature separating students from working adults. Over half of the 36 high school employees were teachers; the remainder included administrators, custodians, and teachers' assistants. The 11 assorted adults participating in the survey represented a broader occupational range. This subgroup included workers from business, construction, government and food service.

The fourth category of respondents consisted of 40 residents of Pohai Nani Good Samaritan Kauhale. This evangelical Lutheran retirement center is part of a chain of 200 facilities around the United States. This particular sample consisted almost entirely of Caucasians, many having come as adults from the continental United States. This disproportionate ethnic representation may in part be explained by differences in family living between white and non-white cultures. For while the nuclear family arrangement predominates among whites in the United States, the extended family, has been more traditional among non-whites.[25]

Conclusion

During the last three decades, considerable progress has been made in bringing the subject of euthanasia to the fore of public awareness. In the 1960's Kubler-Ross brought attention to death and dying. The 1970's saw an open interest in the subject of euthanasia. With today's so-called "graying of America," it is even more appropriate to look at many aspects of life for the aged and infirm, if the quality of life is to be enhanced for the nation's aging populace.

Suffering, coupled with complex medical, moral and legal issues, is clearly perceived as a poignant social dilemma. Both private and public sectors are exploring economic and humanitarian issues in health care choices. Nearly half of the states in the U.S. permit the use of living wills. Organizations, like the Society For The Right To Die, are calling direct attention to euthanasia.

This study's findings, like others,[26] found that age and education can be key variables in exploring societal attitudes. The importance of political and religious association, race and level of income were not supported in the findings of this study. Gender was somewhat meaningful in that a higher percentage of males were supportive, rather than opposed to euthanasia. In short, the original hypothesis that age and education are determinant factors in a person's view of euthanasia was born out. The greater one's life experience, as measured in increasing age and level of education, the more favorable one's attitude toward euthanasia will be.

While the health care providers contacted during this study concur in finding little change in the attitudes of staff, patients, and families since the passage of this statute, they concur that there is a clear need for legal guidelines on the issue of termination of life-supporting medical treatment.[27] As a functional democratic society attempting to meet the needs of its myriad peoples, one must move beyond analysis in academia and the media. With the passage of laws providing for living wills and durable powers of attorney for healthcare decisions, Hawaii is reaching toward resolution of this area of social, medical and legal consideration.

But many socio-economic, legal, and medical questions will have to be answered before passive, let alone active, euthanasia can become an acceptable practice. As Dr Stephen Wallach observed, everyone is learning about this issue. In their desire to fulfill patient requests, courts must consider many complexities:

1) the extent of impairment of the patient's mental faculties;
2) whether the patient is in the custody of a State institution;
3) the prognosis without the proposed treatment;
4) the complexity, risk and novelty of the proposed treatment;
5) its possible side effects [sic];
6) the patient's level of understanding and probable reaction;
7) the urgency of decision;
8) the consent of the patient, spouse, or guardian;
9) the good faith of those who participate in the decision;
10) the clarity of professional opinion as to what is good medical practice;
11) the interests of third persons;
12) the administrative requirements of any institution involved.[28]

As the United States stands on the threshold of health care reform, the issue of euthanasia is all the more relevant. What level of care

Table 1.—Combined responses of total sample of 185 persons, in 9 age groups, to combined euthanasia conditions (expressed in overall acceptability of euthanasia, measured from positive to negative).

Age Group	Most Positive	Positive	Neutral	Less Positive	Negative	Mean Score
<18	18.4%	18.8%	34.9%	9.4%	17.3%	2.1
18-22	17.8%	28.9%	32.6%	9.6%	11.1%	2.3
23-29	52.3%	26.2%	4.6%	7.7%	9.2%	3.0
30-39	45.9%	28.2%	10.6%	9.4%	5.9%	3.0
40-49	46.1%	27.8%	9.6%	9.6%	7.0%	2.9
50-59	35.0%	30.0%	1.7%	21.7%	8.3%	2.6%
60-69	37.1%	37.1%	8.6%	17.1%	0%	2.9
70-79	43.1%	29.2%	7.7%	6.2%	10.8%	2.9
80>	42.9%	23.8%	7.6%	7.6%	9.5%	2.9
Probability					0.35	0.92

Table 2.—Combined responses of total sample of 185 persons, in 8 age groups, to combined euthanasia conditions (expressed in overall acceptability of euthanasia, measure from positive to negative).

Education	Most Positive	Positive	Neutral	Less Positive	Negative	Mean Score
K-11	19.6%	19.3%	33.0%	9.6%	17.4%	2.1
High School or GED	40.0%	22.9%	19.0%	12.4%	5.7%	2.8
Technical School	55.0%	10.0%	5.0%	15.0%	15.0%	2.8
Some College	33.7%	26.8%	20.5%	9.3%	9.8%	2.6
2 years of College	32.3%	23.5%	10.8%	7.7%	4.6%	2.9
4 years of College	36.3%	40.8%	7.4%	10.4%	3.7%	3.0
Master's Degree	44.0%	23.0%	3.0%	11.0%	13.0%	2.8
PhD. or Equivalent	75.0%	5.0%	0%	5.0%	10.0%	3.4
Probability					0.40	0.95

is appropriate to the various social classes? Who will have access to transplants and other life-sustaining medical technologies?[29] The rich, the middle class, the poor? How long will patients be maintained on costly life support systems? At what point should a patient, their family and or health care provider be permitted to terminate costly medical care? Who will determine the fate of those who are not to receive continued care? Will passive, if not active, euthanasia become a wholly-accepted option in health care in America? Further study of this social dilemma will need to be undertaken before American society reaches a level of consensus sufficient to develop definitive public policies and guidelines.

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Euthanasia: Murder or Mercy?

Kenneth W. Phifer Senior Minister
The First Unitarian Universalist Church of Ann Arbor Michigan

Euthanasia has become one of the most urgent issues of our times. This has come about because of the development of technology that has enabled us to sustain our existence far beyond the "natural" course of life. Sometimes this extension of life involves an improvement of the functioning and the well-being of the patient. Not infrequently, though, it is only the dying process that is extended. The question this has forced upon us in the modern age, especially in the last several decades, is whether there is a point at which death is kinder than life. This is the issue of euthanasia, how we die: when, where, by what means, in whose presence, and by whose authority.

In dealing with this issue, it is advisable to declare one's personal involvement. Mine began in the first year of my ministry some 22 years ago. An older woman told me that she wanted to die. She was weary of pain and helplessness. She felt diminished by being a care-receiver rather than a care-giver. Life had no pleasure or purpose for her other than pain relief. She was without hope. She wanted the release of death, and was not even able to help herself to accomplish this. It took eight years of misery for her yearning to become reality. My efforts to comfort her were futile, even, as I look back now, cruel.

More recently I was involved with a congregant, Merian Frederick, who sought out the services of Dr Jack Kevorkian. On October 22, 1993 Merian took her life in Royal Oak, Michigan, in the presence of her son and daughter-in-law, Dr Kevorkian, and myself. Her choice was made after a struggle of several years with ALS (Lou Gehrig's Disease) and with the awareness that she would soon lose her only means of communicating with the world, the strength in her fingers to write her thoughts on a yellow pad or tap out a message on her computer.

I had known Merian for 12 years, worked with her in many capacities in the church, and counseled with her and her family on many personal issues. We had discussed euthanasia theoretically for many years before she first experienced the symptoms of ALS. Within a few days of her being diagnosed, that conversation became very practical and very personal. As her spiritual counselor, I worked with her to be sure that every possible option was considered and then considered again. Her family was intimately involved in this conversation and in the eventual decision which Merian made.

Had there been a better way for Merian to be relieved of what she viewed as pure hell—a good mind soon to be unable to communicate because of the ruined body in which it was housed—she would have chosen it. Having made her choice, she spent the last days of her life more happilqy and more purposefully than at any time since learning the name and nature of her disease.

One lesson from this experience is that suffering is easier to bear if there is a known terminal point to it.

Two decades ago I felt helpless before a woman's request. Two years ago I was able to be helpful, though doing so meant a certain minor amount of legal risk. In between these benchmark experiences and after the second one, I have had many occasions to confront this issue of how we die. These experiences and much study and reflection have led me to support the moral right of competent adult persons at the end of their lives to choose death over continued suffering, and to seek the help of professionals and of loved ones in ending their lives if that is necessary.

I support euthanasia.

Like most individuals and most religions, I support passive euthanasia, allowing someone to die without taking heroic measures to save them.

Like a growing number of individuals but almost no religion except Unitarian Universalism, I also support active euthanasia, the right of a person to seek and obtain competent help to end a life that has become or soon will be unbearable.

If we choose active euthanasia, we should have the best available help to make the terminal point of life truly good and gentle for us. This may call for professionals in health care, like doctors and nurses. It may mean family or close friends. It may mean both.

We should not die in great agony or with doubt about whether we shall succeed in ending our lives or with concern for those who have helped us to die. We should die without pain, with certainty that death does await us as a relief from our suffering, and with confidence that our loved ones and care-givers will not be legally threatened because of their kindness to us.

If loved ones and professionals are able to cooperate with us, the moment of our death can be truly full of love.

At this time I am not prepared to defend such a choice for children, for non-competent adults, or for those who are comatose who have not given explicit instruction prior to their becoming unconscious.

Five principles guide my thinking and my acting

First, mere existence is not an absolute value.

That which exists changes, grows, deteriorates, becomes something quite different. Value is found more in the process than in the simple existence of any form of life. Conscious and articulate life, human life, sometimes can choose its changes, grounding that choice in values and meanings derived from it own life experiences. Sometimes the change that is made is death, an end to this existence being preferable to a continuation of it.

Every one of the religions and philosophies which have had major influence on our society argues this way. Socrates believed that death was better than violating the law of the city. Jews perished at Masada rather than be enslaved. Christians martyred themselves rather than betray their god by bowing to a Roman deity.

There are ideals, values, principles, and persons for which and for whom we would give up our lives if called upon to do so. What parent would not sacrifice their own life to save the life of their child? There are people who risk their lives, and sometimes lose them, in rescuing a stranger.

By making such a choice as this, we are at least implicitly saying that our death helps someone who is left behind. In certain circumstances, we may regard that way of helping another as being of higher value than our own existence.

To choose death sooner rather than later, actively rather than passively, can be an act of high moral stature.

Mere existence is not an absolute value.

The second principle is that we should respect life.

We should rejoice in life and be glad that we are alive. We should not give up life cheaply or quickly, our own or others. We should live as fully as we can for as long as we can. But there are different ways of doing this.

My friend Pansy respected life by defying her doctors when they declared that her 96 year old kidneys had shut down and were not going to function again. Three months after this diagnosis, she went home. She went back to her purposeful work of calling people who were house-bound or in nursing homes and hospitals to cheer them up. She kept this up until her energies gave out one year later and she died.

The Pitney VanDusens also respected life. They loved each other over many years. They made a pact as part of that love that they would die together. When both were of advanced age, and one of them was in very poor health, one day they simply lay down on their marital bed and he took her life and then his own. They made it clear that they did not wish to live under conditions in which they could not give but only take, conditions in which they would only be a burden to others, conditions in which they could only suffer. It was time for them to move on. They respected life by ending it and making room for someone else to enjoy life.

Sometimes choosing to die is as much a sign of respecting life as choosing to live.

A third principle is that suffering in and of itself has no moral worth.

Religions (like Christianity; see Augustine, Aquinas, et al) that include in their teaching the idea that the deity gives us pain in order to help us grow spiritually or to chastise us for our sinfulness are missing the moral mark. How could anyone have confidence in a deity who would cause the kind of suffering that one can see daily in hospitals, nursing homes, and emergency rooms. My experience as a chaplain at the Massachusetts Hospital School for Handicapped Children revealed to me the enormous suffering through which some children must go. The various ailments of these youngsters were not the consequence of their moral failings. They were simply damnably bad luck. I could not imagine a divine figure who would bring such anguish to these gutsy boys and girls and their families. That they redeemed their suffering with courage and humor and hard work did not make me or them grateful for their pain and disability. It only made me and others more appreciative of their endurance and their achievements.

Suffering that we have not chosen does not in and of itself have any moral value. Disease, accident, decline, great age do not themselves have moral worth. How we face them does. One ethical way of doing that is by choosing not to let that suffering continue when it is of such magnitude that nothing else in life matters and there is no hope of relief save in death.

Suffering is not itself moral. Only our response to it can be moral.

The next principle is this: the autonomy of each individual must be respected.

Within the constraints of time and place and ability, each of us can choose how to live and each of us should be allowed to choose how we die. It is not that we have a right to die, as though there were an alternative to dying we must somehow resist. It is that, if death does not surprise us, we have a right to choose the moment of our letting go.

Autonomy is essential in moral action. Autonomy means that we are informed about the conditions in which we find ourselves and that we have legitimate options between which to choose. Autonomy does not mean that we are coerced subtly or overtly into one decision or another. It means that we freely make the choice we deem best.

Autonomy is necessary if we are to have meaning as moral creatures. It must be as applicable in our waning days and hours as it is when we are in full strength.

The fifth principle is that our individual lives are imbedded in community.

It is in the connections that we make to others that the deepest layers of meaning in our lives are revealed. We make these connections with families, friends, colleagues, neighbors, people who share our religious or political outlook or who enjoy the same sport or hobby. We also make connections with people who are different from us and who in their difference call upon us to enlarge our vision of the human collective.

In all the major decisions of our living, thinking about and sharing with a wider network of associations is important for understanding the larger meaning of what we are choosing to do.

This is especially true when it comes to decisions about ending our lives. It is of great importance that we begin **now** to talk with those we care about regarding our feelings about death and dying. How long do we wish to live when our condition is terminal and our suffering great? Such talk helps us to know the impact of our decisions about how we want to die on those who survive us. In loving relationships, this knowledge may sometimes, and rightly, influence the choices we make.

Preparing Advance Medical Directives and a Durable Power of Attorney helps to clarify our views at this moment. Such documents announce to loved ones and strangers how we wish to confront our own ending. Together with conversation, these papers help others to understand, even if they do not agree with us, why we have made the decision we have made.

Death and dying are in one sense the most individual and isolating events of our lives. But in another sense these moments are very communal. The dying and death of any person we love touches us, changes us, alters the way life is for us.

The presence at memorial services of physicians, nurses, and other health care workers and care-givers testifies to the fact that those who are with us professionally in our last days are also part of our community.

No one is an island. The death of any of us affects all who know that person. How that death occurs is often as significant as the fact of death.

We live and we die in community.

These five principles are the basis of my support for passive and active euthanasia.

That support is not without an awareness of concerns raised by opponents of active euthanasia. Some of these concerns have more validity than others.

The concern that seems most valid to me is that when you move the line of what is permitted, you also sometimes move the line of what is expected. There is a danger that if active euthanasia (aid in dying) were legal, some who would not otherwise do so might be subtly coerced into choosing to end their lives.

It is easy to imagine a situation in which a member of a family that is already under great stress is given a particularly grim prognosis. However loving the discussion with that person may be, she may come to feel that dying sooner rather than later is what everyone really wants, even if that is not what she desires. Her choice of death

in this situation may not really be her choice.

Financial pressures, the burdens of care, the example of others can all conspire innocently to push a person towards a decision he or she might not really want to make. We must be very careful how we frame laws and how we construct systems of aid in dying so as to minimize the chances of this happening.

A second concern that merits attention is the present structure of health care in this country. It is a vast commercialized bureaucracy—actually it is a mess of competing bureaucracies with more than 1500 insurance companies, thousands of hospitals, and governments at Federal, state, and local levels—with mountains of paper work, endless delays, complicated rules and regulations that defy comprehension, unintelligible jargon, and expenses that boggle the imagination.

The system appears to be designed to make insurance companies wealthy, doctors very comfortable but also very frustrated, and those of us who need medical attention consumers and not patients, as though freedom of choice were more important than competent medical care for every person in the country.

It is hard to believe that such a sensitive issue as aid in dying would not be cheapened by the institutional processes by which Americans now must struggle to be treated for their ills. How many forms in triplicate will we have to fill out? How long will we have to wait for approval of our request? How long must we linger while insurance clerks decide if active euthanasia is covered by our policy?

For the sake of those whose suffering brings them to decide on active euthanasia, we must be sure that neither greed nor an indifferent bureaucracy gets in the way.

Other concerns about aid in dying are less meritorious.

One of these concerns is that by allowing aid in dying, programs in pain management and care programs like hospice will lose money and support. Nothing that I have ever read or heard from proponents of assisted suicide argues that this should or will be done. There is room for many approaches to dying, from the care-oriented attitudes of hospice to palliative pain prescription by a physician in a hospital to aggressive cure-oriented treatment by research doctors to assistance in gently ending a life.

Most people who support active euthanasia also support increased degrees of pain medication to keep people truly comfortable. The problem has been with the refusal of some and the reluctance of other physicians to do this.

Another dimension to this is the fact that not all pain can be managed. What right has any of us, much less society at large, to force people to endure grievous pain that cannot be relieved short of total unconsciousness with no hope that this can be changed? If a person in such a condition pleads for death, as many of us might do, by what moral standard do we continue to refuse to give them the help they are begging for?

A kind system of health care would recognize that different people will make different choices in these agonizing circumstances. A kind system of health care would make provision for all possible choices: risky experimental procedures, hospice care, adequate pain management, and aid in dying for those who choose it.

One other major concern raised by opponents of active euthanasia is that to make aid in dying legal we will be asking doctors to be killers as well as healers. Doctors, it is argued, cannot be both. Doctors, it is argued, must not violate the Hippocratic Oath which many of them have taken upon graduation from medical school. Since Do No Harm is part of that oath, helping someone to end their life is a violation of the Oath because death ends life and therefore is harmful.

Those who rely on the Hippocratic Oath read it selectively. They do not, for example, also call upon modern doctors to swear by the ancient gods dear to Hippocrates. They do not have protest marches outside of operating rooms, even though Hippocrates said that "I will not use the knife."

More important than arguments about how to interpret ancient documents is the simple fact that doctors cannot always be healers. Each of us will come to a point in life when no medical treatment will help us, save perhaps to relieve our pain. At that point, when our condition is terminal, what we need more than anything else is intelligent compassion. We need people who understand the pain in our bodies and the suffering in our souls.

Compassion may well be to give us drugs and apply therapies to make our bodies feel better. But for some of us, compassion may well be to help ease us into death.

Doctors already do this, and do it legally and with the support of most religious communities. What they do is act under the principle of the double effect. The double effect is the principle by which doctors prescribe for pain even though they know that the level of medication prescribed will kill the patient.

This is a kindness for those whose bodies are racked with pain, whose spirits are sore with despair, who have no realistic hope this side of the grave, and who want relief from the pain. They want out of life. It is a kindness for the families who suffer watching helplessly as their loved ones writhe in agony.

What I do not understand is why aid in dying is not also a kindness when performed with the full conscious participation of the dying person who has made repeated requests to die. To know that I can choose the moment that my anguish will be no more is to re-create hope within me. The only moral difference I can see between aid in dying and the double effect is that in the former it is the patient who is in control, who chooses the when and the where and the with whom, while in the latter it is the physician who is in control.

Morally the double effect and aid in dying are the same. In both cases, the patient, the families, and the doctor know that death will be the direct consequence of the actions taken. Indeed, that is the desired consequence. It is scandalous to me that the double effect is legal and aid in dying is a criminal act.

Ultimately the issue of how we die is a spiritual issue, not a medical or legal one. Religion has a vital role to play in this issue, though sadly many religious leaders have not been willing to assume that role.

Part of that role is to be a spiritual counselor to those who are confronted by death. Our task is to help people to think clearly about the options available. Our task is to give full emotional, moral, and spiritual support to whatever decision the person before us makes. Our responsibility is to be with people, not tell them what they must do or judge them because their decisions do not agree with ours.

Furthermore it is important for us to be a dynamic part of the societal conversation that is taking place right now. The best way we can do this is by discussing the issue as rationally as we are able to do, by encouraging discussion among our congregants and others, by writing and speaking and being active in seeking legislation that will defend a point of view consistent with our religious understanding.

Margaret Battin of the University of Utah some years ago was suggesting that churches and synagogues were likely going to be centers through which individuals would come to engage a physician who would assist them to die. She cited the work of many religious communities in the 1960s and early 1970s in helping

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Why I Do not Believe in Mercy-Killing

S.Y. Tan MD, JD*

I view with grave concern the gathering momentum towards the legalization of mercy-killing (physician-assisted suicide and active euthanasia) in this country. Prior efforts to legalize mercy-killing have been rebuffed. However, on November 8, 1994, Oregon's voters narrowly approved Measure 16, which permits physicians to prescribe lethal doses of medication at the request of competent terminally-ill patients for the specific purpose of ending their lives. And earlier this year, appellate courts in the 2nd and 9th circuits found a constitutional right to physician-assisted suicide based on notions of equal protection and liberty. Although the final chapter of this debate is yet to be written (the U.S. Supreme Court will take up the issue in January 1997), one cannot help but be troubled by America's increasingly fatal attraction to "managed-death."

I do not believe in mercy-killing and I am not persuaded by the arguments advanced by its advocates. Here's why:

The Mercy Argument

Ask any mercy-killing enthusiast, and he will tell you that physicians should, in the name of mercy, assist their terminally-ill patients to die. What is the point of forcing dying patients to bear unbearable pain and discomfort? We treat our suffering pets with greater compassion; we should therefore treat our loved ones no less. Medical science at any rate, appears more interested in high-tech than high-touch, often failing to provide effective pain relief and comfort care. Thus, it is merciful, and therefore right, to extinguish both indignity and infirmity upon request at the end-of-life.

These assertions, well-intentioned though they be, paint a mistaken and inaccurate picture of the dying patient, and are overly harsh on the medical profession. For one thing, the vast majority of patients do not die in unbearable pain and suffering. Secondly, even for the seemingly recalcitrant case, effective pain relief has become available, and better doctor education can be expected to dramatically improve this aspect of clinical care. Thirdly, physicians are now more willing and ready to prescribe narcotics in doses sufficient to effectively relieve pain, even if they should unintentionally hasten death. In a recent survey of 1,028 physicians in Hawaii, we found that 88% were willing to do so.

There are other measures that speak to compassion for the suffering. Palliative medicine is now a recognized specialty in Canada, and may soon be in the U.S. American medicine has embarked on a major initiative to improve end-of-life care which includes a curriculum for physician education in pain therapy. Medicare is responding as well: it now reimburses hospitals for specific palliative treatment that previously went unpaid.

Then there's hospice — a compassionate home- or facility-based respite for the terminally-ill, where comfort care and psychosocial and spiritual support help soothe the final journey of life. Thousands of patients have benefited from hospice care, which has admirably delivered its promise of a gentler and more peaceful parting.

One can raise direct objections to the mercy argument. For example, who should be the "beneficiary?" Only the terminally-ill? How does one define the term "terminal," knowing full well that doctors are notoriously inaccurate in their prognosis regarding time of death? Shouldn't patients who are severely impaired neurologically (how about 'modestly' impaired?) or in a persistent vegetative state be treated mercifully as well, even if they are not terminal?

As for the "we treat our pets more compassionately" contention, I find it more specious than persuasive. Suffering, after all, is part of the human condition. To equate human life with animal life trivializes human dignity. Let's carry this comparison to its absurd conclusion — we shoot horses, don't we?

Incidentally, the mercy argument necessarily allows both doctors **and** non-doctors to help patients die. After all, it is the patient who "benefits", and it should make no difference who does the assisting-in-death. On mercy, Shakespeare reminds us that "it is twice blessed; it blesseth him that gives, and him that takes." If mercy is the *raison d'être* for legalizing mercy killing, then the law should not restrict its performance by the medical profession.

The Free-Choice Argument

This argument reminds us that patients have the right to decide what is done to their bodies (autonomy or self-determination), and they should therefore have the right to request assistance in dying as part of their medical care. After all, whose life is it anyway?

At first blush, this looks like a winning argument. We all value our independence, and being empowered to control the time, place and manner of death creates a definite if macabre appeal. The autonomy argument weakens however, when we realize that it imposes the demand of one person upon another to terminate life. Additionally, mercy-killing undermines the integrity of the medical profession whose unchanging credo has always been to heal and comfort, not to kill.

The free-choice argument is further undercut by living-will statutes that allow terminally-ill patients to forgo life-sustaining treatment when they are no longer able to communicate their wishes. This allows the patient to die naturally without futile treatment. A durable power-of-attorney for healthcare decisions is even better.

* Professor of Medicine
John A. Burns School of Medicine
University of Hawaii

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Lethal Aid—Physician or Lawyer-Assisted Suicide?

James H. Pietsch JD*

This article will provide informaiton about the current legal status of the right of a person to request physician-assisted suicide. It will provide a background on two appellate court cases wich dealt with this issue and the significance of the U.S. Supreme Court's intervention.

When United States Supreme Court Justice Antone Scalia was asked last Spring whether the Supreme Court should take on the issue of physician-assisted suicide after two appellate courts had ruled on the issue, he remarked, "Why would you leave that to nine lawyers, for heaven's sake?" Now that the Supreme Court has intervened, many continue to ask why lawyers need to be so involved in medical decisions to end life and where the legal system may be taking all of us in the area of self-determination, death and dying with dignity. We should not espouse what Shakespeare in Henry VI had Dick (the butcher) say, as he plotted a new government: "The first thing we do, let's kill all the lawyers." Instead, first let's review what the lawyers have done.

Two influential federal appeals courts, the 9th U.S. Circuit Court of Appeals in San Francisco and the Second U.S. Circuit Court of Appeals in New York, each ruled last Spring that terminally ill patients have the legal right to request physicians (and certain other health care providers) to assist them in killing themselves. Although the two circuit courts used different legal theories, they both expanded the ability of terminally ill persons to commit suicide and provided protections to physicians and certain others who help them. The 9th Circuit Court decision has a direct impact on residents of Hawaii since its rulings apply in Hawaii as well as several other western states. Coming from two traditionally influential circuit courts and coming so close in time, the two opinions put into question laws throughout the country which directly or indirectly may prohibit assisted suicide. In *Compassion in Dying v. State of Washington, 79 F.3d 790 (9th Cir. (Wash.) March 6, 1996)* three terminally ill patients (a 69-year old retired pediatrician who had suffered since 1988 from cancer which eventually metastasized throughout her skeleton, a 44-year old artist dying of AIDS and a 69-year old retired sales representative who suffered from emphysema which caused him a constant sensation of suffocating), four physicians, and nonprofit organizations brought suit against the state of Washington. They sought a declaration that a statute that prohibited causing or aiding another person to commit suicide violated the Federal Constitution. The 9th Circuit Court ruled that the Washington statute which banned the promotion or assistance of suicide and which prohibits physicians from prescribing life-ending medication for use by terminally ill, competent adults violates the due process clause of the 14th Amendment of the United States Constitution. In its ruling, the court stated, "The decision how and when to die is one of the most intimate and personal choices a person may make in a lifetime, a choice central to personal dignity and autonomy."

Significantly, in a footnote in *Compassion in Dying* the court indicated that legally recognized surrogates (such as those appointed in a valid durable power of attorney) should also be permitted to carry out decisions for physician-assisted suicide when the patient is no longer able to communicate such decisions. The court indicated that the state's duty to preserve life is outweighed by the right to control "the time and manner of one's death." It also indicated that "a competent, terminally ill adult, having lived nearly the full measure of his life, has a strong liberty interest in choosing a dignified and humane death rather than being reduced at the end of his existence to a childlike state of helplessness, diapered, sedated, incompetent." *Compassion in Dying* was the first right to die case that the 9th Circuit Court or any other federal court of appeals has ever decided.

On the East Coast, in *Quill v. Vacco, 80 F.3d 716 (2nd Cir. (N.Y.)* April 2, 1996), the 2nd Circuit Court ruled that two New York statutes penalizing assistance in suicide violated the equal protection clause of 14th Amendment of the U.S. Constitution. The action giving rise to this appeal was commenced by a complaint filed by three physicians and three individuals then in the final stages of terminal illness (a 76-year-old retired physical education instructor who was dying of thyroid cancer, a 48- year-old publishing executive suffering from AIDS and a 28- year-old former fashion editor under treatment for AIDS). Each of these plaintiffs alleged that she or he had been advised and understood that she or he was in the terminal stage of a terminal illness and that there was no chance of recovery. Each sought to hasten death "in a certain and humane manner" and for that purpose sought "necessary medical assistance in the form of medications prescribed by (her or his) physician to be self-administered."

The physician plaintiffs alleged that they encountered, in the course of their medical practices, "mentally competent, terminally ill patients who request assistance in the voluntary self-termination of life." Many of these patients apparently "experience chronic, intractable pain and/or intolerable suffering" and seek to hasten their deaths for those reasons. Each of the physician plaintiffs has alleged that "under certain circumstances it would be consistent with the standards of (his) medical practice" to assist in hastening

* William S. Richardson School of Law
University of Hawaii Elder Law Program
2515 Dole Street
Honolulu, Hawaii 96822
Ph (808) 956-6785
Fax (808) 956-9439

This article will provide information about the current legal status of the right of a person to request physician-assisted suicide. It will provide a background on two appellate court cases which dealt with this issue and the significance of the U.S. Supreme Court's intervention.

death by prescribing drugs for patients to self-administer for that purpose. The physicians alleged that they were unable to exercise their best professional judgment to prescribe the requested drugs. The other plaintiffs alleged that they were unable to receive the requested drugs, because of the prohibitions contained in sections of the New York Penal Law. All plaintiffs were residents of New York.

In *Quill v. Vacco*, the 2nd Circuit held that the New York statutes criminalizing assisted suicide violated the Equal Protection Clause of the Federal Constitution because, to the extent they prohibited a physician from prescribing medications to be self-administered by a mentally competent, terminally-ill person in the final stages of his terminal illness, they were not rationally related to any legitimate state interest. In this case the court did not find that assisted suicide is a constitutional right. Rather it found that the New York law failed to uphold the constitutional guarantee of equal protection of the law. Patients on life-support equipment are allowed to hasten their deaths by instructing their physicians to withdraw or withhold life-sustaining treatment but patients desiring lethal doses of medication to hasten their deaths are denied that right. In its decision the court stated: "What interest can a state possibly have in requiring the prolongation of life that is all but ended? And what business is it of the state...to interfere with a mentally competent patient's right to define (his) own concept of existence, of meaning, of the universe, and of the mystery of human life?"

Just when it seemed that the medical and legal communities had exhausted their respective predictions on what would happen next, the U.S. Supreme Court did what nobody seems to have predicted. First, Associate Supreme Court Justice Sandra Day O'Connor temporarily blocked the 9th Circuit Court's ruling that struck down Washington state's ban on physician-assisted suicide. Justice O'Connor's order was to remain in effect until her further order or a subsequent order of the U.S. Supreme Court or at least until all briefs related to an expected appeal to the full U.S. Supreme Court had to be submitted. Then, in what would be called *Washington, et al.,applicants,v.Harold Glucksberg, et al.No. A-974*, the Supreme Court of the United States on June 10, 1996 issued the following unusual subsequent stay:

Application for stay of issuance of mandate of the United States Court of Appeals for the Ninth Circuit, case No. 94-35534, issued on May 29, 1996, presented to Justice O'Connor and by her referred to the Court is granted pending a timely filing and disposition by this Court of a petition for writ of certiorari. Should the petition for a writ of certiorari be denied, this stay terminates automatically. In the event the petition for a writ of certiorari is granted, this stay shall continue pending the sending down of the judgment of this Court.

In October the court decided to grant Certiorari. Clearly, we are in a new environment when it comes to dealing with the issues of self-determination, death and dying with dignity. Ultimately, the issue of physician-assisted suicide will be decided by the United States Supreme Court. The Supreme Court may be interested in consistency in dealing with this issue or it may leave the issue to be decided by the respective states. Whether the decisions are permitted to stand or not, many questions must still be resolved. If it is permitted, will physician-assisted suicide be limited to terminally ill patients? If so, who will decide whether a person is terminally ill and how will the term be defined? Who will determine if a person is of sound mind and not, for example, clinically depressed? Who determines if a person is making a request voluntarily and whether the person is "competent" to make decisions? What are the limits, if any, to a person's right to self-determination—to refuse unwanted treatment or to seek relief from pain or to commit suicide? May a person designate a surrogate to carry out his or her decisions? What safeguards will patients have and what standards will medical personnel need to follow, if any? What interests do the states have in this area?

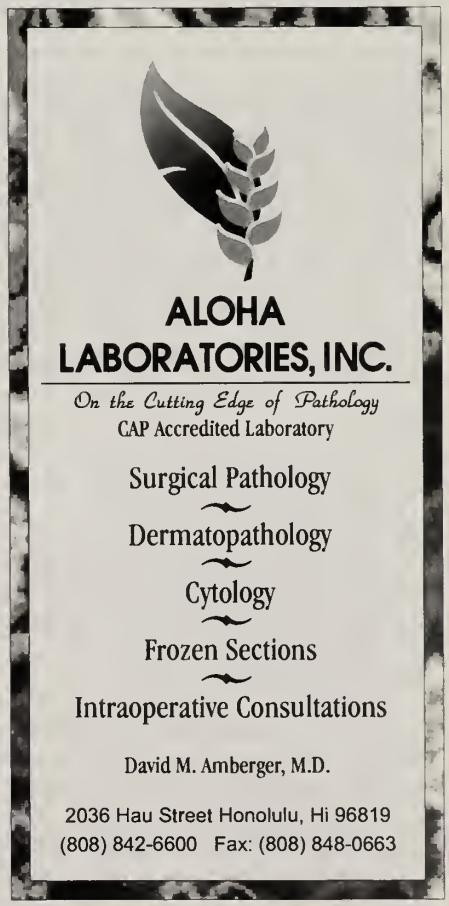
Until we get more guidance from the court, the dilemma of how to approach physician-assisted suicide will continue to face the medical profession. Even after the courts have ruled, guidelines will have to be established to reflect a new environment with respect to self-determination, death and dying with dignity. In seeking to regulate what may appear to be unregulated, a multi-disciplinary approach will serve to protect the legal interests of the entire community while taking into consideration important medical, religious, moral and ethical concerns. While lawyers may not seem to be the most likely profession to deal with medical matters of life and death, fundamental constitutional interests and legal protections are involved. The medical profession may have no choice but to include the legal profession, along with legislatures and others concerned with the welfare of our community in addressing these grave issues. Lawyers should be seen as assisting physicians to assist their patients with decisions about their own lives.

Editor's Note:

James H. Pietsch, JD, is the Director of the University of Hawaii Elder Law Program (U.H.E.L.P.) and Associate Professor of Law at the U.H. William S. Richardson School or Law. He received his B.A. at Georgetown University and Juris Doctor degree at the Catholic University of America in Washington, DC. He is very active in our University, serving on the Council on Aging, the Center on the Family Advisory Committee and the Committee on Human Studies.

Jim is also a very active member of Ah Quan McElrath's Ad Hoc Committee on Death with Dignity. Thank you, Jim, for reviewing the complicated legal aspects involved with "lethal aid".

The issue of Death with Dignity is the ultimate example of medical teamwork—not just physicians, but attorneys, legislators, the clergy, social workers, family members and the general public must work together to develop sensible and compassionate guidelines for those who need our help when they cannot help themselves.



St. Francis Hospice: Medicare and Health Care Reform

Michael A. Warren RN, BSN, MA

The St. Francis Hospice Program is symbolic of more than 100 years of Franciscan dedication to the people of Hawaii. Since Mother Marianne's arrival in November of 1883, the Sisters of the Third Franciscan Order Syracuse, New York have responded to the calling; "the charity of Christ impels us." It is through this calling that care and comfort for the terminally ill is a part of the mission of St. Francis Healthcare System. The magnificent spirit through which Hospice services have been made possible, is a reflection of God's great generosity to us throughout the years.

Background

Originally, hospice was a medieval name for a way-station for weary travelers, where they could be cared for, replenished, and refreshed. In 1967, Dame Cicely Saunders MD. founded the first modern day hospice, St. Christopher's Hospice in England. The mission of St. Christopher's Hospice was to use palliative care as a focus in providing for pain and symptom management. Comfort care was to be focused on the patient and family, thus providing dignity at the end of life.

Historically, dying had been a natural process in which families, friends and care givers were intimately involved. In previous centuries, the majority of people died in their homes. However, advances in modern technology extended the dying process far beyond the normal limits of the body. Until recently, more than 90 percent of deaths were occurring in the hospitals and other institutional settings. In the 70's and 80's, the impetus for the development of hospices grew out of the recognition that the needs of terminally ill patients and their families were not being met effectively, by the existing health care system, and of the need to reduce medical costs, which often skyrocket during this period.[1]

In 1974, the first hospice in the United States was begun in New Haven, Connecticut. Today, there are over 2,700 hospices located throughout the United States. Here in Hawaii, there are eight hospices:

1) St. Francis Hospice - Oahu
2) Hospice Hawaii - Oahu
3) Hospice of Hilo - Hawaii
4) Hospice of Kona - Hawaii
5) North Hawaii Hospice - Hawaii
6) Ka Ea Hou Mahelona Hospice - Kauai
7) Kauai Hospice - Kauai
8) Hospice Maui - Maui

Today, the term hospice is used to describe a program that assists terminally ill patients and their loved ones, in facing impending death with dignity and meaning. Hospice care focuses primarily on the care of the patient and family and not on the disease and its treatment. At the point in which a terminally ill patient and his/her family chooses hospice care, it becomes more than just philosophy or theory. Rather, it becomes a unique approach in providing care for both the patient and family, either at home or in an inpatient facility.

Terminal cancer is the leading diagnosis of hospice patients. Approximately a sixth of our patients have diseases other than cancer, including ALS (Lou Gehrig's Disease), Alzheimer's Disease, Chronic Lung Disease, Parkinson's Disease, Chronic Kidney Failure, AIDS, and End Stage Heart Disease.

St. Francis Hospice

St. Francis Hospice was begun in 1978 and is today the oldest and largest hospice program in the state, with an average daily census of 70 -75 patients. This program supports families and other care givers by providing skilled assistance in the home, which allows patients to remain with their loved ones, rather than be institutionalized in an acute care facility for the final months of their lives.

St. Francis Hospice provides a choice to the terminally ill patient for whom the traditional medical approach may no longer be appropriate. The hospice philosophy emphasizes palliative care rather than curative treatment, and has developed in response to growing concerns that medical care, with its technological emphasis, has become increasingly insensitive to the needs of terminally ill patients and their families.

Although we continued to focus and promote hospice home care services, it soon became apparent that as the population of patients grew in the home setting, so too, would the need for a hospice inpatient setting grow. Thus it was that the St. Francis Hospice - The Sister Maureen Keleher Center, a 12-bed inpatient facility was opened in 1988. This facility provided a home like setting for both the patient and family, where the acute care needs and the respite needs of the patient and their family could be met.

As the aged population continues to increase, so does the terminally ill population. This particular population requires more health care, as well as supportive care. Many cannot rely on their children for care and support. The very old have children who are also old and in today's society children, because of economics tend to be engaged full time in the work force, leaving no one at home to tend to the terminally ill. Those who are able to help at home, often find that the nursing care needs are so skilled and demanding that the only alternative is taking their loved one back to the emergency room or to an acute hospital. Recognizing both the current and the future needs, a 24-bed hospice inpatient facility, St. Francis Hospice - EWA, is being built in order to meet the hospice needs of the West Oahu population.

St. Francis Hospice provides a comprehensive medical/social model of providing care for terminally ill patients experiencing a life limiting and irreversible disease. An interdisplinary team approach aimed at controlling physical, emotional, spiritual, and social pain affords the patient the opportunity for reconciliation and life fulfillment. The following bundle of services are included in the

provision of hospice care: Nursing, Social Work, Dietician, Home Health Aide, Homemakers, Chaplain, Volunteers, Bereavement, Durable Medical Equipment, Pharmacy, Medical Supplies, Laboratory, and Counselors. Nurses are on-call 24 hours a day. Respite care is also provided. Hospice care is community centered, physician directed, and patient/family focused. The interdisplinary team is in place 24 hours a day, 7 days a week.

Medicare Hospice Benefit

In 1982, the Medicare Hospice Benefit was first funded through the Tax Equity and Fiscal Responsibility Act (TEFRA). Through the Consolidated Omnibus Budget Reconciliation Act of 1985, the benefit became a permanent part of the Medicare program. Certified hospice providers are payed a per diem payment based on four defined levels of care: Routine Home Care, Inpatient Respite Care, General/Acute Inpatient Care, and Continuous Home Care. Patients may elect hospice care but must meet the following criteria:

1) Medicare Part-A eligibility,
2) voluntary election of the hospice benefit, and
3) physician certification of an anticipated prognosis of less than six months.

Patients who elect their hospice benefit continue to receive services for other diagnoses unrelated to the terminal illness. Medicare uses the hospice benefit as a mechanism to transfer case/care management and cost risk to the hospice organization. While Medicare pays the per diem rates, the hospice is responsible for providing the services needed by the patient.[2] The following is taken from a hospice article written by Lubash and Dunn:

> The per diem reimbursement provides incentive for the hospice organization to manage costs by minimizing the use of acute and inpatient facilities, maximizing the contribution of available family members and other volunteers, and negotiating prices with all providers.

The Medicare Hospice Benefit covers the full cost of standard hospice services in the home. Many other forms of insurance reimburse all or part of the cost of hospice care. In the event the patient is not insured and the cost of care causes family hardships, hospice services will be provided, based on sliding-scale eligibility. Table 1 gives a comparison of the Hospice Medicare Benefit and Standard Medicare Coverage.

How patients gain the most from the Medicare Hospice Benefit:

- It eliminates the financial strain of costly drugs.
- It gives the hospice interdisplinary team freedom to make more frequent visits when needed.
- It eliminates the financial burden of medical equipment.
- It allows the family respite care when a break is needed.
- Bereavement services are provided for up to one year after the death of the patient.

Health Care Reform

The need to control the rising cost of health care is a key element in health care reform. Studies have demonstrated that hospice care reduces the cost of insurance and private costs in the terminal phase. Hospice changes the focus of care from aggressive, curative treatment and technology to palliative intervention. This shift in focus results in substantial cost savings, a key element in health care reform. Shifting the focus results in substantial cost savings because of the use of managed care, lower use of costly technology and the absence of acute hospitalizations of a dying patient as compared to those who are not receiving hospice care.

Table 1. Comparison of the Hospice Medicare Benefit and Standard Medicare Coverage:[3]

Hospice Services	Medicare Hospice Coverage	Standard Medicare Coverage
Pharmacy/Drugs	95-100%	0
Inpatient Respite	5 days	0
Durable Medical Equipment	100%	80%
Intermittent Nursing services	100% Unlimited period regardless of level of care	0 Coverage only while strictly defined skilled nursing care is required
Extended Nursing visits**	100%	0
Intermittent home health aide visits	Same as coverage of nursing services	Same as coverage of nursing services
Extended home health aide visits**	100%	0
Hospitalizations (In hospice inpatient or contracted hospital)	100%	80%
Bereavement	100%	0

**Extended visits are longer than regular visits

Hospice care currently is available to many, but not all terminally ill patients. In Hawaii, hospice care is available to all Medicare and Medicaid Beneficiaries, through most Health Maintenance Plans (HMOs), such as Kaiser and Hawaii Medical Service Association (HMSA), and through a growing number of private insurance plans.

Under both Federal and State Health Care Reform proposals, it will be essential that hospice care be included in the basic benefit plan. Rather than waiting for some direction to emanate from Washington in the form of health care reform, St. Francis Hospice is taking a pro-active role to embrace these uncertainties and to work towards defining the role of hospice in the future.

Although anxiety about health care reform is very high, hospices are finding themselves extremely well positioned as a viable alternative to acute hospital care. St. Francis Hospice finds itself growing as its target population, the elderly, increases and as hospice services become more acceptable as a viable health care alternative. St. Francis Hospice continues to take strides towards helping more terminally ill patients and their families achieve quality of life during the last six months of life; a viable alternative to the very controversial 'physician assisted suicide' as advocated by Dr. Jack Kevorkian. By reducing the overall cost in health care, we also become a major player in health care reform.

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Life and Death in Hawaii: Ethnic Variations in Life Expectancy and Mortality, 1980 and 1990

Kathryn L. Braun DrPH*, Haiou Yang PhD**, Alvin T. Onaka PhD***,
Brian Y. Horiuchi MPH****

Life expectancy in Hawaii is among the highest in the nation. Past research, however, found significant ethnic differences in longevity. This study presents life expectancy estimations for 1980 and 1990, along with ethnic differences in mortality rates for specific causes of death. The findings suggest that ethnic differences continue, with Chinese and Japanese having the longest life expectancy and Native Hawaiians having the shortest.

Introduction

Past research found significant differences in life expectancy and mortality rates among Hawaii's major ethnic groups.[1-7] To what extent do these difference exist today? To address this question, this paper presents updated life expectancy and mortality rate estimates by gender for the five major ethnic groups in Hawaii—Caucasians, Chinese, Filipinos, Japanese, and Native Hawaiians (full and part Hawaiian). Based on Department of Health statistics, of the state's 1990 population of 1,108,229, about 208,653 (19%) were Native Hawaiian, 285,524 (26%) were Caucasian, 259,465 (23%) were Japanese, 161,063 (15%) were Filipino, and 67,386 (6%) were Chinese.[8]

Ethnic differences in health status has been a long-standing concern of local researchers. Focusing on life expectancy, Park, Gardner, and Nordyke presented life tables by ethnicity over the century.[4] While they found that life expectancy for the total population of Hawaii had improved from 45.69 years in 1920 to 74.20 years in 1970, they also found ethnic differences at each time point. In 1920, for example, Caucasians had the longest life expectancy (56.45 years), followed by Chinese (53.80 years), Japanese (50.54 years), Hawaiians (33.56 years), and Filipinos (29.12 years). By 1970, the pattern had changed, with the longest life expectancy seen among Japanese (77.44 years), followed by Chinese (76.11 years), Caucasians (73.24 years), Filipinos (72.61 years), and Hawaiians (67.62 years).[4] In 1984, Gardner constructed life tables based on 1980 data, finding that life expectancy was still longest for Japanese and Chinese and shortest for Native Hawaiians.[6]

Among published reports of ethnic variation in mortality rates, a good overview of the 1980-1986 data was provided by Johnson.[7] It showed a remarkable similarity in leading causes of death across ethnic groups, i.e., for all five major ethnic groups, heart disease was the leading cause of death, cancer was the second, and cerebrovascular disease (CVD) was the third. For all groups, accidents, influenza/pneumonia, and diabetes appeared as either fourth, fifth, or sixth leading cause of death. Cross-ethnic comparison of these mortality rates showed that individuals with Hawaiian ancestry had the highest overall death rates, as well as the highest death rates for the major causes of death.[7] Focusing specifically on Native Hawaiian mortality across the century, a 1982 study by Look found significantly higher mortality rates among full Hawaiians compared to part Hawaiians and to the general population.[9]

This paper presents a summary of the life expectancy estimates and age-standardized mortality rates for the five major ethnic groups in Hawaii. These findings are from a program of research being undertaken by the authors and associated researchers to expand and update work in comparative mortality and longevity in Hawaii. Our earlier work updated the 1982 Look study, finding that 1990 mortality rates were still significantly higher among full and part Hawaiians compared to non-Hawaiians.[10-12]

Methods

This paper reports findings of two studies, one of comparative longevity and another of comparative mortality rates. In both studies, mortality rates were estimated by dividing the number of deaths by the population at risk for each age-gender-ethnic category. In estimating mortality rates, the death data were derived from vital records maintained by the Department of Health. Population estimates were based on Hawaii Health Survey estimates, as adjusted by the Cancer Research Center of Hawaii,[13-14] rather than on U.S. Census estimates. These two data sources differ in their classification of ethnicity, resulting in the enumeration of 30% fewer Native Hawaiians by the U.S. Census compared to the Hawaii Health Survey in 1990. Because the ethnicity classification procedure of the Hawaii Health Survey more closely matches that of the death record, we consider the Hawaii Health Survey the better of the

* Associate Professor of Public Health
and Director, Center on Aging
University of Hawaii
1960 East-West Road
Honolulu, HI 96822
Phone 808) 956-5768
Fax (808) 956-9582
e-mail kbraun@hawaii.edu
**Research Associate,
Cancer Research Center of Hawaii
*** Office of Health Status Monitoring
Hawaii Department of Health
**** Supervisor, Research and Analysis Section
Office of Health Status Monitoring,
Hawaii Department of Health

two sources of population data.

In the comparative life expectancy study, age-gender-ethnic-specific mortality rates were estimated and used to construct life tables. The life table procedure generates a measure of life expectancy, denoting the average number of years that would be lived by members of a newly born group given the current age-gender-ethnic-specific mortality rates. In order to compare findings of this research with previous studies, we followed the technique used in Gardner's 1984 publication[6] with some modifications (e.g., longer life expectancy overall allowed us to use age 85+ as the terminal age category, rather than age 75+, in our calculations). Because of this, we recomputed the 1980 life tables using the modified method. While this provides a set of 1980 findings with which to compare our 1990 findings, it also means that our 1980 results differ slightly from the 1980 findings published by Gardner.[6] A full description of the modified methodology is presented elsewhere.[15]

In the comparative mortality study, 1980 and 1990 mortality rates were estimated for specific age-gender-ethnic categories by major causes of death. Because of small numbers of deaths in some cells, rates were based on data from 5 years around each decade. (In contrast, rates estimated in the life expectancy study were based on data from 3.5 years around the decade, as done by Gardner).[6] This "averaging" procedure is necessary to help smooth fluctuations of deaths that occur year-to-year. Rates were standardized to the 1940 U.S. population using the indirect method and 95% confidence intervals were estimated using a method developed by Mantel.[16-17]

While our study produced age-gender-ethnic-specific mortality rates, presented here are mortality rates and 95% confidence intervals by gender and ethnicity only.

Findings

Life Expectancy

Life Expectancy over the Century. Table 1 shows findings from our life expectancy study (1980 and 1990), combined with findings of Park, Gardner, and Nordyke (1920-1970).[4] These data indicate that, overall, life expectancy in Hawaii has improved tremendously over the century, from 45.69 years in 1920 to 78.85 years in 1990.

Table 1.—Life Expectancy at Birth by Gender, 1920-1990, State of Hawaii

Period	Total	Male	Female
1920*	45.69	45.64	45.75
1930*	53.95	52.70	55.86
1940*	62.00	59.92	64.86
1950*	69.53	67.77	71.67
1960*	72.42	70.39	74.75
1970*	74.20	72.12	76.44
1980**	77.87	74.54	81.51
1990**	78.85	75.90	82.06

* Park, Gardner, & Nordyke (1979)
** Yang, Braun, Onaka, & Horiuchi (1996)

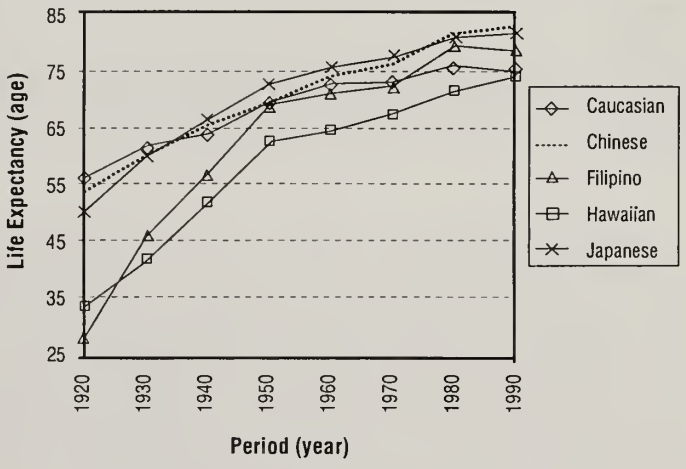
While dramatic improvements occurred earlier in the century, improvements between 1980 and 1990 were also noted. Specifically, Hawaii's life expectancy in 1990 (78.85 years) was almost a full year longer than in 1980 (77.87 years). The improvement in life expectancy at birth between 1980 and 1990 was greater for males (from 74.54 to 75.90 years, a gain of 1.36 years) than for females (from 81.51 to 82.06 years, a gain of .55 years). The difference in life expectancy between men and women, which became apparent in 1930, is still evident in the 1990 data, with females "outliving" males by 6.16 years.

Life Expectancy by Ethnicity. As shown in Table 2, ethnic variations in longevity continued to exist in 1980 and 1990. Specifically, the 1990 life expectancy was 82.93 years for Chinese, 82.06 years for Japanese, 78.94 years for Filipinos, 75.53 years for Caucasians, and 74.27 years for Native Hawaiians. Although ethnic difference still exist, looking across the century (see Figure 1) suggests that life expectancy among the ethnic groups is continuing to converge.[3] In fact, while the 1920 discrepancy between the longest and shortest lived groups was 28 years,[4] the 1950 discrepancy was only 10 years,[4] and the 1990 discrepancy was only 8.7 years (Table 2).

Table 2.—Life Expectancy at Birth by Gender and Ethnic Group, 1980 and 1990, State of Hawaii

Ethnicity	Total	Male	Female
Caucasian			
1980	75.79	72.80	79.28
1990	75.53	72.90	78.60
Chinese			
1980	81.65	78.91	84.51
1990	82.93	79.76	86.11
Filipino			
1980	79.32	76.61	83.36
1990	78.94	77.63	81.51
Japanese			
1980	80.91	77.75	84.09
1990	82.06	79.49	84.49
Native Hawaiian			
1980	71.83	68.18	75.63
1990	74.27	71.48	77.20

Fig 1.—Expectancy at Birth by Ethnicity, 1920-1990, State of Hawaii



The gender differential is also apparent by ethnicity. Looking at the 1990 data, for example, the gender difference is most pronounced among Chinese (with women living 6.35 years longer than men) and least pronounced among Filipinos (with women living 3.88 years longer than men). The life expectancy for Hawaiian males (71.48 years) is the lowest among all groups.

The changes in life expectancy between 1980 and 1990 were not

consistent across gender-ethnic groups. Looking by gender, it appears that males made more gains than females between 1980 and 1990. For example, Native Hawaiian men gained 3.30 years compared to 1.57 years for Native Hawaiian women. Japanese men gained 1.74 years while Japanese women gained only 0.40 years. Filipino men gained 1.02 years while Filipino women lost 1.85 years. Caucasian men gained 0.10 years while Caucasian women lost 0.68 years. The exception is among Chinese, with women gaining 1.60 years compared to 0.85 years for men.

Comparative Mortality

Leading Causes of Death. Table 3 shows the top ten causes of death by gender and ethnicity. Heart disease, malignant neoplasms, and cerebrovascular disease (CVD) were the top three causes of death in 1990, regardless of ethnicity or gender, except for Caucasian males, for whom HIV was the third leading cause of death and CVD was the fourth. In contrast to the 1980 data, cancer (rather than heart disease) was the leading cause of death for females in all ethnic groups except Native Hawaiians in 1990.

Table 3.—Ranking Within Each Ethnic Group of Leading Causes of Death by Gender and Ethnicity, State of Hawaii, 1990

Cause of Death	Cauc M	Cauc F	Chin M	Chin F	Fil M	Fil F	Jap M	Jap F	Hawn M	Hawn F
Heart Disease	1	2	1	2	1	2	2	2	1	1
Cancer	2	1	2	1	2	1	1	1	2	2
CVD	4	3	3	3	3	3	3	3	3	3
COPD	6	4	8	9	7	7	6	6	7	5
MVA	7	6	4	6	4	4	9	7	4	7
Influ/Pneumo	9	5	5	5		6	4	4	9	6
Diabetes		8	7	7	8	5	8	5	5	4
Suicide	5	7	9	4	6		5	8	8	
Oth Accidents	8	10	6		5		7	10	6	9
HIV	3		10		10				10	
Perinatal				10	9	10		9		8
Chronic Liver	10	9					10			
Nephritis				8		8				
Homicide						9				
Septicemia										10

The next three leading causes of death differed by ethnic group. Ranked as either fourth, fifth, or sixth leading cause of death were: diabetes (for Native Hawaiians and for Filipino and Japanese females); motor vehicle accidents (for Chinese and Filipinos and for Caucasian females and Native Hawaiian males); suicide (for Caucasian, Filipino, and Japanese males and for Chinese females); COPD (for Caucasians, Japanese, and Native Hawaiian females); influenza/pneumonia (for females in all groups and for Chinese and Japanese males); and other accidents (for Chinese, Filipino, and Native Hawaiian males). This is in contrast to Johnson's 1980 finding that the second three leading causes of death were the same across ethnic groups—accidents, diabetes, and influenza/pneumonia.

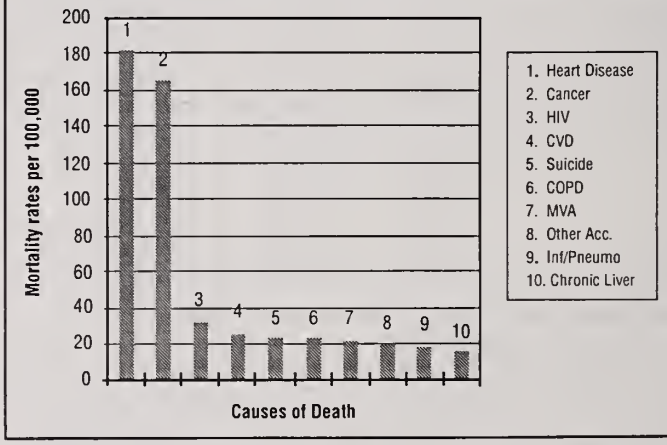
Table 4 ranks 1990 age-adjusted mortality rates across the five ethnic groups. It shows that, of the five groups, Native Hawaiians had the highest mortality rates for heart disease, cancer, MVA, other accidents, and diabetes. Caucasians had the highest mortality rates for HIV, Suicide, COPD, and influenza/pneumonia. Filipinos tended to have intermediate rates compared to the other groups. Overall, Chinese and Japanese had the lowest mortality rates of the five ethnic groups with a few exceptions: Chinese females ranked second in age-adjusted rates of suicide for women; Chinese males ranked second highest in death from diabetes among males; Filipino men led in CVD deaths; and Japanese ranked relatively high in death from influenza/pneumonia. The actual age-standardized mortality rates for all causes of death and for death from heart disease and cancer are provided below.

Table 4.—Ranking Across Ethnic Groups of Leading Causes of Death by Gender and Ethnicity, State of Hawaii, 1990

Cause of Death	Cauc M	Cauc F	Chin M	Chin F	Fil M	Fil F	Jap M	Jap F	Hawn M	Hawn F
Heart Disease	2	2	4	4	3	3	5	5	1	1
Cancer	2	2	5	4	3	3	4	5	1	1
CVD	3	2	5	5	1	3	4	4	2	1
COPD	1	1	5	5	3	3	4	4	2	2
MVA	2	3	4	5	3	2	5	4	1	1
Influ/Pneumo	1	1	5	5	4	4	3	2	2	3
Diabetes	5	3	2	5	3	2	4	4	1	1
Suicide	1	1	5	2	3	4	4	3	2	5
Oth Accidents	2	2	4	5	3	4	5	3	1	1
HIV	1	1	4	5	3	2	5	4	2	3

Figures 2-11 display the mortality rates for the leading causes of death for each gender-ethnic group. Even-numbered figures show rates for males while odd-numbered figures show rates for females. The scale is constant across graphs so that the relative magnitude of mortality rates can be assessed at a glance. The exception is for Native Hawaiians (Figures 10 and 11) whose exceptionally high mortality rates for heart disease necessitate a different scale.

Fig 2.—Mortality rates per 100,000 Population for Top Ten Causes of Death for Caucasian Males, State of Hawaii



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Fig 3.—Mortality rates per 100,000 Population for Top Ten Causes of Death for Caucasian Females, State of Hawaii

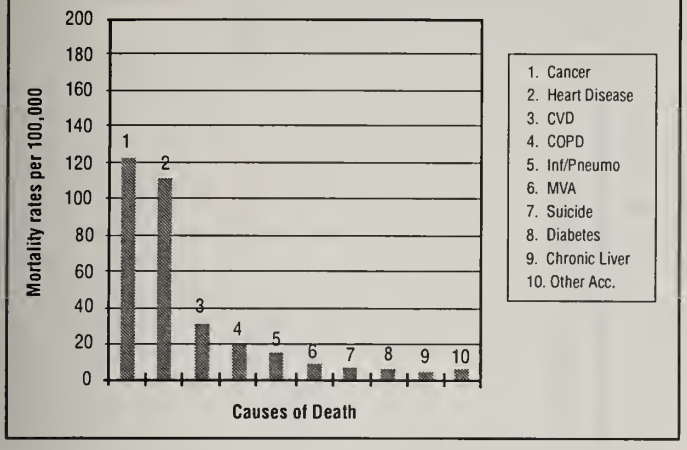


Fig 4.—Mortality rates per 100,000 Population for Top Ten Causes of Death for Chinese Males, State of Hawaii

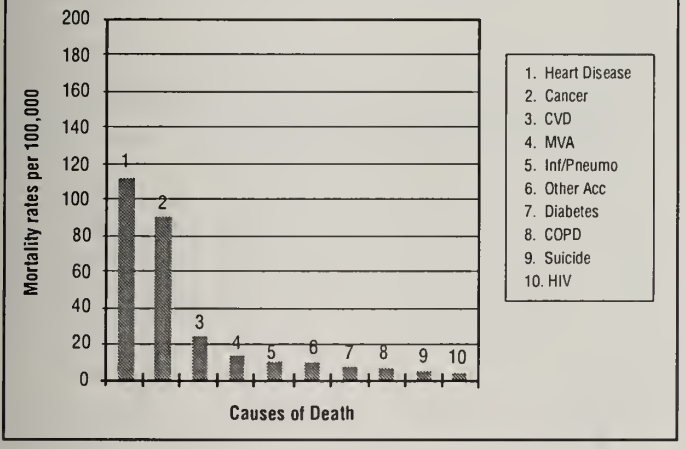


Fig 5.—Mortality rates per 100,000 Population for Top Ten Causes of Death for Chinese Females, State of Hawaii

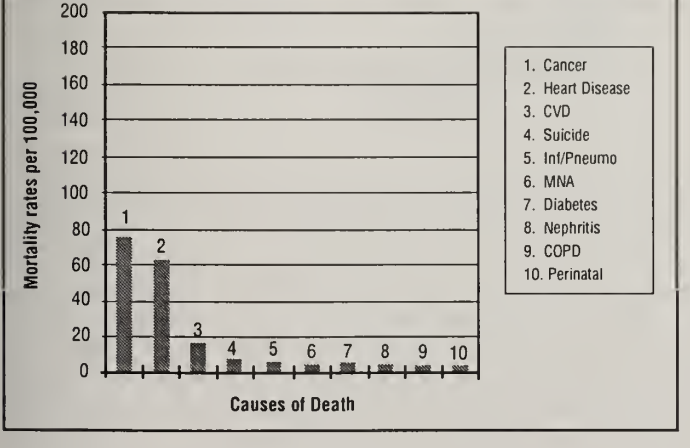


Fig 6.—Mortality rates per 100,000 Population for Top Ten Causes of Death for Filipino Males, State of Hawaii

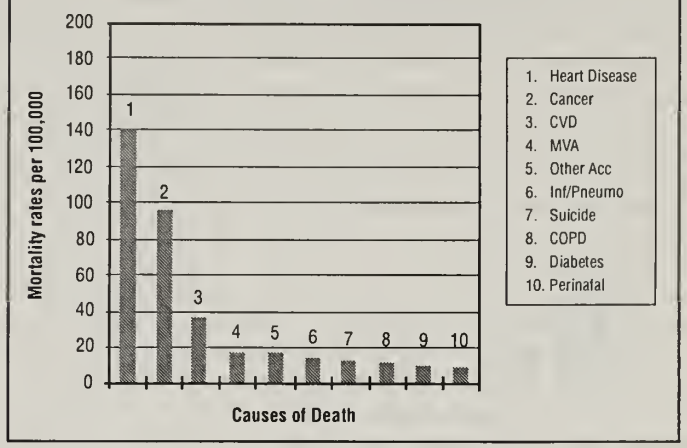


Fig 7.—Mortality rates per 100,000 Population for Top Ten Causes of Death for Filipino Females, State of Hawaii

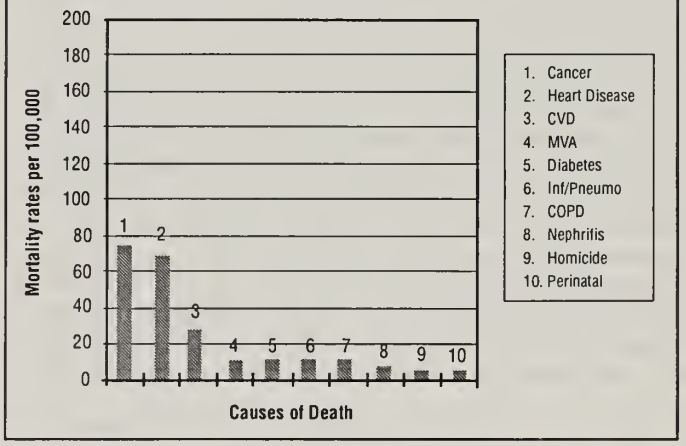


Fig 8.—Mortality rates per 100,000 Population for Top Ten Causes of Death for Japanese Males, State of Hawaii

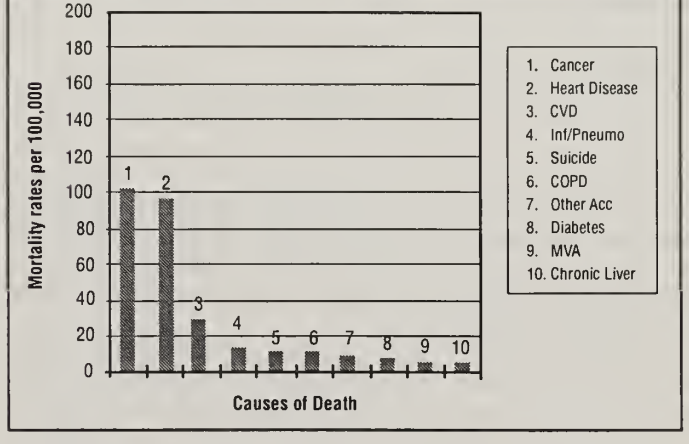


Fig 9.—Mortality rates per 100,000 Population for Top Ten Causes of Death for Japanese Females, State of Hawaii

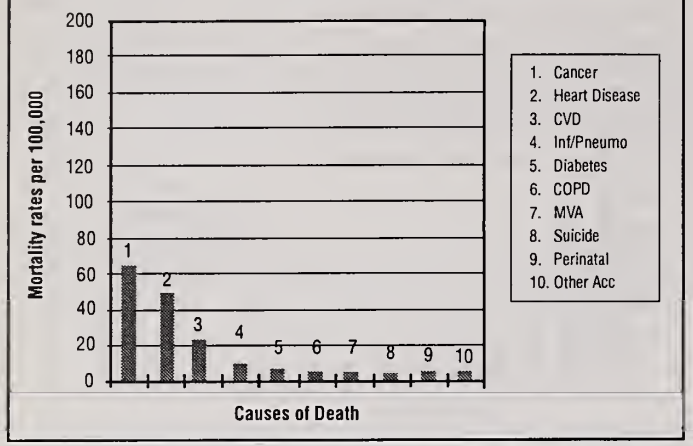
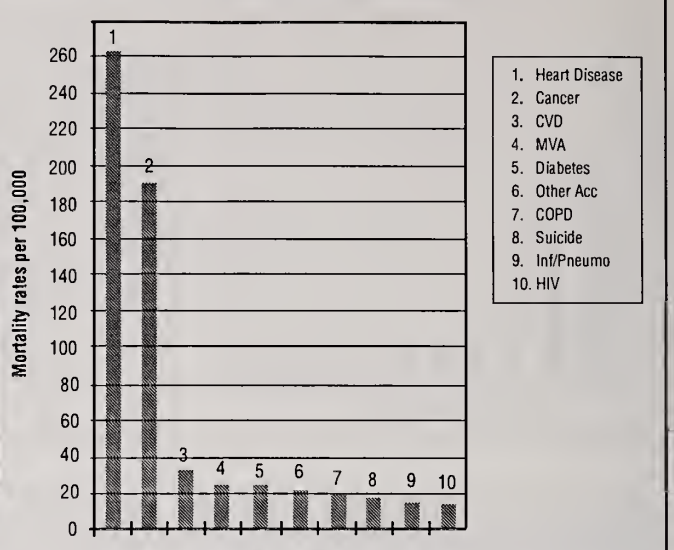


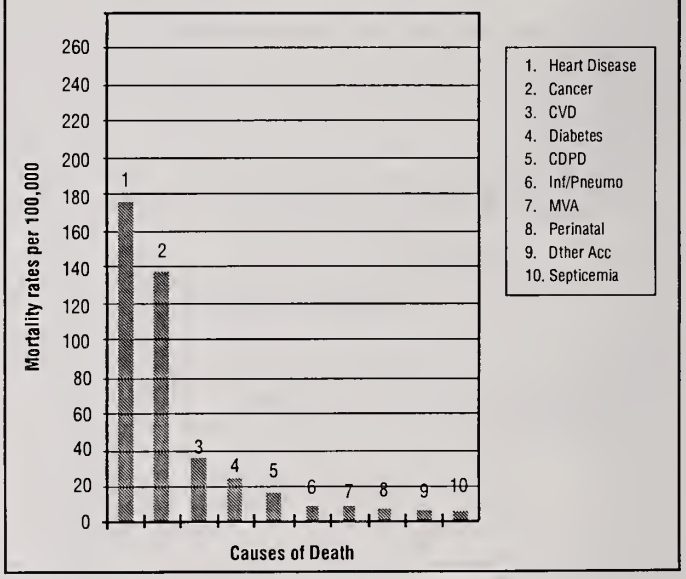
Fig 10.—Mortality rates per 100,000 Population for Top Ten Causes of Death for Hawaiian Males, State of Hawaii



Mortality Rates for Heart Disease, Cancer, and all Causes of Death. Although not shown in the tables, we tested the inter-ethnic differences in mortality for statistical significance by estimating each mortality rate's 95 percent confidence intervals and checking for overlapping intervals. (Where intervals do not overlap, the differences in mortality rates are significant.) Using this method, we found that the all-cause mortality rates for males were significantly higher than for females within each ethnic groups in both decades. Within gender categories, mortality rates for Native Hawaiians were significantly higher than for all other ethnic groups. In addition, Caucasian mortality rates were significantly lower than Native Hawaiian mortality rates but significantly higher than Chinese, Filipino, and Japanese rates.

The same pattern appeared for heart disease, i.e., male mortality rates were significantly higher than female rates within each ethnic group and, within gender categories, Caucasian rates were significantly lower than Native Hawaiian rates but significantly higher than the Chinese, Filipino, and Japanese rates. A different pattern emerged for cancer mortality. Here, the gender differential appeared only among Japanese, with significantly higher cancer mortality rates for Japanese males than Japanese females. Within gender categories, the difference in rates between Caucasians and Native Hawaiians was not significant; however, rates for both of these groups were significantly higher than for Chinese, Filipinos, and Japanese.

Fig 11.—Mortality rates per 100,000 Population for Top Ten Causes of Death for Hawaiian Females, State of Hawaii



Discussion

The life expectancy findings suggest that ethnic differences in longevity continued to exist in 1990, with Japanese and Chinese having the longest life expectancy and Native Hawaiians having the shortest. Of particular interest is the relative ranking of the Filipino group; while they had the shortest life expectancy in 1920 and the second shortest from 1930 to 1970, they ranked third longest in life expectancy in 1990, behind Chinese and Japanese. Gender differences in life expectancy also continued, with women outliving men in every ethnic group.

Although life expectancy among ethnic groups continued to show convergence,[3] differences were still apparent. The obvious question is "why the differences?" To test the possible explanatory value of "cause of death," this paper includes findings from our mortality study, which also showed ethnic differences. As expected from the longevity study, the three Asian-American groups—Chinese, Filipino, and Japanese—had significantly lower overall mortality rates than did Caucasians and Native Hawaiians in 1980 and 1990. Unexpectedly, differences were also seen among the groups in leading causes of death. For the first time, HIV was among the top three causes of death (for Caucasian males), COPD and suicide were among the top six causes of death (COPD for Caucasians and Japanese, and for Native Hawaiian females; suicide for Caucasian, Filipino, and Japanese males and for Chinese females). Certainly, lowering mortality from HIV would increase life expectancy for Caucasians, for example, as the HIV deaths were among individuals age 25 to 54 (not shown in tables). It is doubtful, however, that differences in causes of death explain much of the variance in life expectancy because, overall, heart disease, cancer, and cerebrovascular disease still account for between 60 and 70 percent of the deaths for all of the gender-ethnic groups (not shown in tables).

A laundry list of other factors have been shown to influence longevity and health status, including genetic predisposition to certain diseases, residency, individual diet and exercise patterns, individual socio-economic status, exposure to environmental hazards, and the general condition of society (e.g., its infrastructure for water, sanitation, and education).[18] While there are some genetically-linked diseases among certain ethnic groups (e.g., sickle cell anemia among individuals of African ancestry[19]), not much is known about genetic susceptibility to disease among Asians and Pacific Islanders. Studies of heart disease, however, have found that residence plays a role in longevity and disease. For example, 1990 life tables from Japan suggest that Japanese Americans in Hawaii have longer life expectancy than Japanese nationals in Japan.[15,20] On the other hand, investigators have found that Japanese residing in California have higher rates of heart disease than Japanese residing in Hawaii who, in turn, have higher rates of heart disease than Japanese in Japan.[21] This finding supports the lifestyle origin of disease, as the diets of these immigrants have become more western as they moved from Japan to Hawaii to California. Ethnic differences in lifestyle have also been documented in Hawaii. For example, data from the state's Behavior Risk Factor Survey suggest that Native Hawaiians have the highest rates of obesity and smoking, that Native Hawaiians and Caucasians have the highest rates of binge and chronic drinking, and that Caucasians have the highest rates of drinking and driving of all ethnic groups.[22] In terms of socio-economic status, federal and state publications include data that suggest that Native Hawaiians are socio-economically disadvantaged compared to other groups (e.g., they have lower income and less education and are more likely to receive government assistance).[22-25] In addition, Native Hawaiians are more likely to live in rural areas with less access to health services.[11,23] Lack of access may help explain the fact that while overall cancer incidence is similar for Caucasians and Native Hawaiians, cancer mortality is significantly higher for Native Hawaiians, suggesting delays in the detection and treatment among Native Hawaiians.[22] Regardless of cause, ethnic differences in mortality rates continue to exist. In addition, variation appears to be increasing among groups in terms of their leading causes of death.

In the interpretation of our findings, several methodological caveats must be considered. First, these data cannot be used to predict individual life span, which is influenced by one's personal genetics, lifestyle, and environment. These data are based on current age-gender-ethnic-specific mortality rates to give an estimate of the average longevity of a specific gender-ethnic group who was born in 1990. Life expectancy estimates are useful, however, in that they provide information about the population at large which is critical for projecting population growth, determining service needs for a population, and allocating resources.[26-27] For example, these data suggest that health programs that reduce the incidence of HIV, accidents, and suicide and programs that target Native Hawaiians may help lower mortality and improve life expectancy for the state as a whole.

A second caveat concerns data comparability. In the life expectancy study, we modified the method used by Gardner[6] because we had better data available to us. Thus, the 1980 figures that appear here will not match the 1980 figures in earlier reports of life expectancy in Hawaii. In terms of source of population data, this study used data from the Hawaii Health Survey as modified by the Cancer Research Center of Hawaii. A few studies of life expectancy and mortality have used the U.S. Census data set instead. Because the method of classifying ethnicity in the Hawaii Health Survey more closely matches the method of classifying ethnicity in the death record, we feel strongly that the Hawaii Health Survey is the preferred source of population data in studies of mortality and life expectancy. It should be noted, however, that its use results in higher estimate of life expectancy among Native Hawaiians (74.27 years vs. 67.95 years based on U.S. Census data) and a lower estimate of life expectancy for Caucasians (75.53 years vs. 78.86 years based on U.S. Census data).[15]

In addition to the differences in the way ethnicity is classified on state and federal surveys, there are other concerns about ethnicity as a measure. For example, all coding methods still depend on individual reports of ethnic heritage, and incentives to report one's ethnicity have changed over the century. While there were true disadvantages for reporting Hawaiian ancestry for much of the century, growing tolerance of diversity, local sovereignty movements, and programs that give Hawaiians increased access to education and land have changed that.[12,28] With high inter-marriage rates in the state (about 40%[29]), classification by ethnicity will become even less clear. Finally, the variable "ethnicity" is confounded by socio-economic status; because U.S. data sets rarely include a standard measure of socio-economic status, ethnicity is often used as a proxy.[30-31] Future research by the authors is proposed that will examine socio-economic status as a predictor of longevity in Hawaii.

Caveats aside, this paper presents the updated life expectancy estimations, by gender, for the five major ethnic groups in Hawaii. These data suggest that: 1) life expectancy in Hawaii increased by almost a year between 1980 and 1990; 2) women continue to have longer life expectancy than men (regardless of ethnicity); 3) the Chinese, Japanese, and Filipino populations have longer life expectancies than do the Caucasian and Native Hawaiian populations in Hawaii; 4) while the leading causes of death in 1990 were still heart disease and cancer, cancer became the leading cause of death for non-Hawaiian females; and 5) Native Hawaiians have the highest age-adjusted mortality rates overall and for heart disease, cancer, MVA, other accidents, and diabetes. While overall improvement in life expectancy continues, ethnic differences in health status remain.

Acknowledgements

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Models of Physician-Assisted Dying

Faye Girsh EdD
Executive Director, Hemlock Society USA

Repeated surveys have shown that more than 70% of Americans support physician aid in dying for terminally ill mentally competent adults.[1] Recent polls of physicians in Oregon[2] and Michigan[3] demonstrate majority support of those doctors for such a law while 25% of physicians surveyed in Washington admitted to already providing help.[4] Models of how that would work have been spelled out in proposed legislation in the United States since 1988,[5] other models come from the Northern Territory in Australia,[6] from Holland,[7] and from Jack Kevorkian's writing[8] and actions as well as from other writers such as Dr Timothy Quill.[9]

In this article I will review some of the main features of these models in an effort to find common elements. In July the U.S. Supreme Court will decide on the constitutionality of this issue; it is likely they will turn it back to the states or the voters to develop guidelines. It is, therefore, helpful to examine the elements that could be included in future proposals.

Holland, of course, is the oldest model having evolved over 23 years of judicial guidelines. The scope of assisted dying is not limited to the terminally ill but includes hopelessly ill people, a tiny minority of whom have had psychiatric conditions which they and their doctors see as hopeless. A small number of patients who received help were not competent and the assistance was provided at the request of the family or on a decision by the physician who had known the patient's wishes. Usually the patient is mentally competent. Assistance is sometimes provided to minors.

Doctors will not be prosecuted if they observe the following guidelines:[10]

1. The request must come from the patient; it must be made freely and voluntarily
2. The request must be well-informed and considered
3. The request must have been made over a period of time
4. The patient must experience unacceptable and hopeless suffering which cannot be satisfactorily relieved
5. The doctor must consult with a second doctor to confirm the decision
6. Only a doctor can assist and must be present

The method is either through lethal injection or a lethal dose of medication self-administered; the death usually occurs at home. The doctor is present as is the family and often a nurse and a clergyman. In the hospital a team of two doctors, a nurse, and a spiritual caregiver evaluate the request.

Doctors report the death to the local medical examiner with comprehensive details covered in a 60 item questionnaire. The coroner views the body, verifies the facts and files a report to the public prosecutor. An investigation occurs if the guidelines do not appear to have been followed, which is relatively rare. Not every request is honored; the Members Aid Society of the Dutch Voluntary Euthanasia Society helps match patients with doctors when there is no help available.

Palliative care is integrated into the delivery of health care generally. Dr Peter Admiraal , a noted Dutch physician who has been assisting patients in a Delft hospital since 1973, notes that to "fail to practice voluntary euthanasia under some circumstances is to fail the patient."[11] He regards it as "the last dignified act of terminal care."[11] The majority of the Dutch population supports the practice although it is not governed by an actual law.

The Northern Territory in Australia is the only jurisdiction in the world in which physician aid is dying occurs under a law, the Rights of the Terminally Ill Act, which went into effect July 1, 1996. The first person in the world to die using voluntary euthanasia legislation was Bob Dent, a 66 year old prostate cancer patient who was helped to die at his home by Dr Philip Nitschke on September 21 with Mrs. Dent present.

Terminal illness is a requirement as defined as one that will lead to death. The competent, adult patient who makes the request must have the diagnosis and prognosis confirmed by the treating physician and by a specialist in the disease. In addition, there must be a psychiatric evaluation certifying the competency to make the decision and an absence of clinical depression. There is a nine-day waiting period after the initial request. Although the law does not require it, Mr. Dent died from a self-administered lethal dose of barbiturates administered by a machine invented by Dr Nitschke. The physician inserts the IV then the patient pushes the button starting the lethal drip after answering three questions on a laptop computer. Death occurs in a few minutes.

There is an effort to rescind this law in Australia; Dr Nitschke has had difficulty finding specialists because of the opposition of the Australian Medical Association. In a letter to members of the Australian parliament a few days before he died Mr. Dent, in describing his deteriorating condition over five years, wrote, "If I were to keep a pet animal in the same condition I am in, I would be prosecuted." Dr Nitschke said, "...I was left with the overwhelming feeling that I had done the right thing, done something good by being able to end the suffering of this brave man."[12]

The Oregon Death with Dignity Bill was passed by 51% of Oregon voters in November 1994. At this writing no deaths have occurred because of an injunction issued by Judge Michael Hogan at the instigation of the National Right to Life Committee. Were it to go into effect it would apply only to terminally ill, mentally competent adults. Doctors would only be allowed to assist by prescribing a lethal dose of medication to be self-administered by the patient. Safeguards include: a written, witnessed directive; examination by an independent physician; an optional request by the treating physician for a psychological or psychiatric evaluation to determine the patient's competence; and reporting by the hospital to the State Department of Human Resources without using the patient's name. The doctor does not have to be present. The appeal of the judicial injunction will be heard by the 9th Circuit Court of Appeal.[13]

Dr Jack Kevorkian is apparently engaged in legal aid in dying in more than 40 cases since he has been acquitted three times in five deaths and is not currently being prosecuted. He has helped competent terminally and hopelessly ill adults who are suffering greatly or, in the case of his first patient, Janet Adkins, anticipate a greatly reduced quality of life and incompetence, and who make the request. There is some question about the subjective quality of the suffering in a few cases but Dr Kevorkian has not been able to use consultants and is not a treating physician.

He has used a "suicide machine" in which he puts an IV in the person's arm then the patient her/himself actually starts the lethal medication. Since he lost his license, Kevorkian has mostly used carbon monoxide. The patient tapes an interview with Kevorkian and a family member is generally present. Recently there have been other health care professionals present and with whom Kevorkian apparently consults. In his book, Kevorkian proposes another model in which physicians are trained as obitiatrists; a patient could go to an obitorium in which requests are screened and medicide is administered.[8]

A thoughtful article in the **Harvard Journal of Legislation**[14] in the Winter of 1996 by nine authors proposed guidelines for a model state act to authorize and regulate physician-assisted suicide. They recommend a prescribing-only model because it accentuates the voluntariness of the patient's decision and it would be more acceptable to the public.

Those eligible would have an incurable illness and subjectively feel that the accompanying suffering is worse than death. There should not have to be a demonstration that the suffering is unbearable. Because the person would have to be competent, someone who is clinically depressed or mentally ill would not qualify. The request must be stated to the physician on at least two occasions that are at least two weeks apart. Information is supplied to the patient in the presence of two witnesses. The physician is allowed but not required to be present at the time of death. The physician's report is confidential and the patient's name is not used.

The decisions of the **9th and 2nd Circuit Courts of Appeal** have declared that state assisted suicide laws which prohibit doctors from helping competent terminally ill patients die by prescribing a lethal prescription of medication are unconstitutional. The Supreme Court has agreed to hear the appeals of these decisions in January, 1997, and to give an opinion in July. They may accept the constitutionality of physician aid in dying and allow the states to draft the safeguards and conditions.

These are just a few of the proposed models from the United States and elsewhere. It is now a question of what form the legalization of physician aid in dying takes and when, not if, it will be permitted. The issues are whether only terminally ill patients would be eligible, as in the Supreme Court cases, or whether it would extend to hopeless illnesses. A doctor may be able to provide direct help (voluntary euthanasia) or just give the patient the means to accomplish it (physician assisted suicide.) The Supreme Court will hear the prescribing only model. The mandatory or optional use of a mental health professional's evaluation will probably be decided in each state's statute. It is likely that two independent doctors will have to evaluate the patient, that there will be a witnessed written request followed by a waiting period, and that the patient will be required to be competent (at least at the time of the first, witnessed request.) In all cases participation of the doctor and the patient would be voluntary; a hospital will probably be able to refuse to have this procedure administered.

The process from a physician's point of view is summarized by Australian urologist, Dr Rodney Syme:

Medical assistance in suicide means that the doctor assists patients with advice, and through the prescription of drugs, enables them to end their lives in a dignified way. This involves the doctor in dialogue to inform the patients of their diagnosis prognosis and treatment options. It involves ensuring that suffering in each case is significant and unalterable, that the patient is rational and not under duress, and that the request is sound and enduring....If the doctor is satisfied beyond reasonable doubt of the bona fides of the request then she or he should be able, after confirmation of the facts by a second doctor, to proceed to assistance without threat of legal sanction.[15]

Or, to quote Dr Timothy Quill:

By exploring our hopes and fears about our own death, and by listening and learning from the stories about those who have directly faced death, we will hope to learn how to use medicine's power judiciously to achieve two of its most important objectives: prolonging a meaningful life and humanizing the process of dying.[16]

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Editors Note:

Dr Faye Girsh is Executive Director of the Hemlock Society USA, a national right to die organization founded in 1980 and based in Denver, Colorado. Prior to accepting this position in August, 1996, she had been a clinical and forensic psychologist in private practice in San Diego for 18 years. She received her doctorate from Harvard University and was in the field of psychology for almost 30 years. Her research was cited by the U.S. Supreme Court and she has testified in ten states. She was a faculty member in the Department of Psychiatry of the University of Chicago, and chair of the Psychology Department at Morehouse College in Atlanta.

She has served on the Boards of several ACLU affiliates, was the founder and president of a nationwide professional organization Psychologists in Addictive Behavior — and is Past President of the San Diego Psychology-Law Society.

Her interest in the right to die began in 1983 she was asked to evaluate Elizabeth Bouvia — a young quadriplegic woman who wanted the right to refuse food at Riverside Hospital.

In 1987 she founded and became the first president of the Hemlock Society of San Diego and editor of their Newsletter, offices she held for nine years. She has written articles on the right to die for medical, legal and psychological journals and has appeared on national TV and radio speaking on the right to die.

A View of Death and Dying Among the Chinese and Japanese

Donald F.B. Char MD*, K.S. Tom MD**, George C.K. Young***,
Rev. Toshio Murakami****, Roger Ames PhD*****

The practices of medicine around the world have been fused into that of faith and religion. In serving our patients' need to accept death, physicians must also be sensitive to this underlying basic human concern as they prepare for this final journey. The Chinese and Japanese, reflecting their belief in Buddhism, perceive death as a natural part and an extension of life itself.

The practices of medicine have been integrated with that of religion from time immemorial. The forerunner of all physicians today were the shamans, witch doctors, or medicine men of the preliterate peoples. Three civilizations developed and went on to document a sophisticated, integrated, tightly reasoned, and comprehensive system of medicine, the ancient Greeks of the West and the Indians and the Chinese of Asia. These medical concepts were inextricably bound to their native precepts of the supernatural forces ruling over their cosmos. Unable to adequately define where human rationality melds into that of faith and trust and belief in their spiritual creators, these earlier medical care systems may have been more acceptable for assisting their suffering patients to accept their limited capacity for healing. Perhaps more importantly, they could better support them in the time of their greatest crisis for coping with death.

Modern biomedicine, rooted in the breakthroughs of rational thinking led to science and technology. It has come to stand out above all other forms of medical care around the world. In extending the domain of human rationality to challenge concepts of nature itself, the mysteries of what was formerly considered to be supernatural have been revealed. Forces of secularism inevitably have arisen to challenge the role of faith and religion in the lives of humankind everywhere.

Biomedically educated and trained physicians in science and its technology have not only learned to cure many diseases that were once thought to be fatal, but have greatly contributed toward extending the lifespan for all who live within the reach of its practices.

* Emeritus Clinical Professor of
Obstetrics and Gynocology
University of Hawaii, School of Medicine
** Emeritus Clinical Professor of
Obstetrics and Gynocology
University of Hawaii, School of Medicine
*** President, Lin Yee Chung Association
Honolulu, Hawaii
**** Minister, Jodo Shinshu
Director, Buddhist Study Center of Hawaii
***** Professor of Philosophy
University of Hawaii at Manoa

In spite of the greatly expanded benefits that can be attributed to the accomplishments of biomedicine, it has not been free from criticism. Much controversy has arisen in many communities regarding its widespread practices. A most distressing dilemma revolves around the question of the use of life support technology for prolonging lives. Perhaps the paramount quandary for everyone involves the question of what constitutes a life of sufficient quality with deeper meaning for the individual if the life is saved but the individual remains infirmed or continues to suffer severe pain. In this problem, physicians must obviously move beyond the question of treating to merely prolong the life of the sufferer. What is the good to be achieved for the patient if the life that is saved becomes so diminished and unthinkable? Physicians are being confronted with this existential nightmare in their practices more frequently today and must learn how better to cope with these critical needs of their patients.

At present, as physicians are being reminded to consider the body-mind connections in caring for the total needs of their patients, questions about the existence of a soul, a spiritual or metaphysical nature of all human beings, are once more being openly discussed for biomedicine.

Faith and religion have always been assumed to be an important factor for coping with the pain and suffering of the patient. Over the past several decades, biomedical researchers began to study human behavior and its relationship to health and concluded that much of human illness and disease result from a person's careless habits and unhealthy lifestyles. The initial research involved questions of excessive stress causing disease, but recently, the question of faith and religion in promoting health and well being and preventing illness has been explored.

Research in the neurosciences using the most advanced technology is producing newer conceptualizations of the brain and its involvement in consciousness, as manifested by thought, perception, feeling, will, memory, or imagination. These newer insights as to how the brain works may well pave the way toward a better understanding of the contributions of faith and belief in health and illness.

Benson, a physician researcher, claims to have uncovered a faith factor that works to heal and prevent diseases. Over two decades ago, he described the Relaxation Response, a hypometabolic physiological state of the body that resulted from a deep self-induced state of meditation. Subsequent research documented that this Relaxation Response could also be "evoked by any of a large number of techniques including meditation, certain types of prayer, autogenic training, progressive muscular relaxation, jogging, swimming, Lamaze breathing exercises, yoga, tai chi chuan, chi gong, and even knitting and crocheting." He proposes that if this state of deep relaxation is combined with the placebo effect, the body's intrinsic capacity to heal itself that he calls "remembered wellness", this faith factor can be produced to heal the body. A strict, regular disciplined

practice of the Relaxation Response is necessary, whether induced by prayer, exercise, meditation or other means. A belief and abiding faith in such devoted practices may be essential for maintaining health.

Should the faith factor suggested by Benson be important for achieving and maintaining health and combatting illness, it would appear to be as valid for the healing of those who are encountering severe diseases and facing death.

Hawaii is a state made up of diverse, multicultural and multiethnic communities in which many differing faiths, beliefs, and religious practices find acceptance. Unlike most other states in the union, the majority of its residents are linked to an Asian heritage. Very private and much more tolerant in their behaviors and character, they often appear to be a shy and inhibited group, rarely revealing their innermost thoughts to others. Highly disciplined and mindful of the needs of others, they are loath to speak about their personal social needs and problems, feeling that help and assistance can generally be met through personal families and kinship. It is understandable that other cultural groups in the community often know little about their traditions, habits and practices in their unique faith and religions.

The United States, rooted in Western European civilization, is built around Judeo-Christian values and faith. Too often, it is assumed that they speak for all other groups. To ensure that other faiths and beliefs systems are recognized, we hope that this cursory overview of the Chinese and Japanese in regard to their faith and beliefs and practices will sensitize physicians and others in the helping professions to approach their critical problems of sickness and dying with fuller and deeper compassion for their unique needs. We may be addressing these problems too simplistically, and although we are listing some of the sources of our information we suggest that there are much more detailed and scholarly writings on these subjects.

We hope that others more knowledgeable about different ethnocultural groups will join us in sharing their unique viewpoints and practices for these critical medical problems.

The Chinese

The first Chinese arrived in Hawaii more than 200 years ago, but it was not until the latter half of the 19th century that they came in significantly large numbers. Predominantly from the poor farming villages of the Kwangtung Province along the coastal areas of Southeast China, they came to seek their fortunes in the land known to them as the Sandalwood Mountains.

It is this Chinese cultural legacy and hardy adventuring spirit that took root and flourished. It has been renewed and nourished by the successive waves of Chinese migrants that followed.

The Chinese civilization has a continuing history of over 5000 years, but it is deeply rooted and clearly identified with the philosophies of Confucius, Lao Tzu of Taoism and Buddha. Coexisting during the epochal period of the 6th century BC, these sages developed their unique social insights relating to humanity and its social problems just as the ancient Greek civilization began to flourish in the West.

All of these philosophies ultimately became integrated and fused in the minds and activities of the Chinese. Confucius taught them a way to be rationally human; Lao Tzu, the acclaimed leader of Taoism, bestowed upon them a sense of intuitive mysticism and awe of nature that permitted them to connect to the metaphysical world and Buddha granted them insight into the hereafter.

These philosophies are frequently discussed separately as distinctive religions, but one must appreciate that these ideas have become inextricably bound to each other in shaping the life and culture of the Chinese. While recognizing and accepting the daily problems for life on earth, they also explain how the Chinese believe in supernatural, spiritual forces that appear to motivate them.

Confucianism unifies the Chinese on a foundation of unique rational humanism. Promoting peaceful and virtuous social intercourse and concern for others, it is rooted in soil that recognizes the need for social discipline and responsibility, advocating proper social etiquette and protocol. Emphasizing harmony, not necessarily truth, as the goal for human interrelationships, it presumes that personal gain must always be balanced against the needs and desires of others. Each individual is born into a nexus of human relationships and these are all ranked in a predetermined order of importance in social obligations. It creates a selfless society in which the individual's interest must be considered subservient to that of the family, which in turn is subservient to that of the community, then the country beyond, the world beyond the country and ultimately, to the hereafter. Any breach of this social protocol may result in rejection and shame for the individual.

Known popularly for its advocacy of concepts of filial piety and ancestor worship, Confucianism is much more involved and complicated, requiring reciprocity in its applications. There is a heavy burden for everyone if it is to work properly. Regarding filial piety, the offspring must not only respect and honor the wishes of the parents, but the latter must be deserving and merit this respect, to stand out as a moral example. All human intercourse is to be distinguished by a sense of humility and responsibility for others, regardless of one's ranking.

Confucius wrote of the five universal obligations and the three moral qualities required to carry them out. The duties recognize those between ruler and subject, parents and children, husband and wife, elder sibling to younger, and between friends. The moral qualities involve wisdom, compassion and courage. The Golden Rule of Confucius states that, "Never do to others what you would not like them to do to you."

For example, in discussing a gentleman, Confucius wrote: "In him were to be found four of the virtues that belong to the way of the true gentleman. In his private conduct he was courteous; in serving his master he was punctilious; in providing for the needs of the people he gave them even more than their due; in exacting service from the people, he was just."

Taoism is the countervailing force to the sobering teachings of Confucius for the Chinese. The word Tao means the "way," "road" or "path". Philosophically, the Tao is the origin for everything in this world. "Tao produced the One; the One produced the Two; the Two produced the Three; and the Three produced ten thousand things." Tao is the primal source, the One is the primordial essence or the chaos from which the universe is created, the Two being Yin (female or negative) and Yang (male or positive), the Three representing Yin, Yang and their unity, from which the abundance of our world is created. This appears to be the story of creation for the Chinese.

The chaos of the universe is organized around contrasting bipolar concepts called Yin and Yang. The darkness of the shadows found on one side of the mountain, the Yin, must be contrasted to the brightness on the opposite side, the Yang; night is contrasted to day, female to male, wet to dry, negative to positive. Eschewing all sharp dichotomies, Taoism sees moderation in all things and rejects extremism. There can be no pure goodness which is not touched with some evil, and vice versa. Somewhere between the bipolar opposites lies the essence of reality.

It was Taoism that gave rise to the conceptualization and practices of traditional Chinese medicine. Invoking the concept of qi (chi), the vital force for life, health resulted if qi flows normally within fixed channels of the body. Treatments using herbs or acupuncture can be useful to correct the obstructed flow of qi when illness strikes.

Linked to these thoughts for saving lives and preventing illness, Taoism also became enshrined as a religious practice. Based upon an acceptance of animistic beliefs in which all natural phenomena and objects, animate or inanimate, are held to have an innate soul or spiritual essence, Taoism is polytheistic. It reveres a pantheon of hundreds of gods or spirits for worship. There are heaven gods such as the sun and moon, earth gods such as rivers, mountains and grains and human spirits or ghosts such as ancestors or sages.

With divine reverence for all of nature, the rituals and practices of Taoism are clearly evident in the customs and behaviors of the Chinese. There is the common practice of burning of firecrackers to celebrate and to chase away the evil spirits, the practice of Feng Shui, a form of geomancy, in building homes, the offering of food and the burning of "money" at the gravesite of one's ancestor during Ching Ming.

The **Tao Te Ching**, the bible of Taoism, consists of only 5000 characters or words. Written in poetic verse, appearing to be lighthearted statements on one hand, it expressed profoundly deep thoughts. For example:

> A man is born gentle and weak
> At his death he is hard and stiff
> Green plants are tender and filled with sap
> At their death they are withered and dry.
> Therefore the stiff and unbending is the disciple of death
> The gentle and yeilding is the disciple of life."

Buddhism entered China from India in the century following the birth of Christ. Part of the Mahayana tradition, it accepted cosmic grace and the greater role of lay persons in its religious activities. It soon became entangled with Taoism and Confucianism. It came to be known as Chan Buddhism because of its emphasis upon meditation (called Zen Buddhism in Japan).

A manifestation of the acceptance of Buddhism in daily Chinese living is the worshipping of Kuan Yin, the Goddess of Mercy. She is derived from Avalokitesvara, an Indian Bodisattva (or "Saint"). Chinese revere her and beautiful statues of Kuan Yin can be regularly found in their homes.

Buddhism is built upon the foundation of the Four Noble Truths. First, one must acknowledge life as suffering; second, the source of suffering is craving or desire; third, to relieve suffering, one must give up desire; fourth, the path leading to giving up desire involves being right in ideas, feelings, speech, actions, livelihood, obedience, mindfulness and meditation. Successfully accomplishing these Four Noble Truths, one could achieve Nirvana, a state of utmost peaceful bliss, "incomprehensible, indescribable, inconceivable and unutterable".



Quan Yin is revered as the goddess of compassion. This statue stands in the Diamond Head Rose Garden of the late Nellian Sen. Pen and ink drawing by Ramsay. Courtesey of the Ramsay Galleries, Honolulu.

The Japanese

The Japanese came to Hawaii for the same reasons that most other Americans did, to escape a life of impoverishment in their native homeland. However, this migration largely involved labor contracts sanctioned by the Japanese government, set up with the American sugar planters of Hawaii. Approximately 200,000 Japanese entered Hawaii between 1885 and 1924. This immigration was finally discontinued through the action of the U.S. Congress which barred further entry of Japanese into the United States. Many women were brought into Hawaii as laborers, and later the "picture bride" program enabled many Japanese men to begin their families in Hawaii.

Most of the Japanese laborers were recruited from the rural farming areas of Southwestern prefectures of Hiroshima, Kumamoto and Fukuoka. Others were recruited from Okinawa, which had recently been reunited with Japan.

Highly disciplined, peace abiding, hard working and concerned with improving upon their lives, they proved to be excellent workers. Sharing many of the characteristics of the Chinese, due to their common cultural history, the Japanese are an eclectic, pragmatic, highly motivated people. Confucianistic in their outlook and habits, strongly centered around supporting their parents and family, they practiced ancestor worship. The Okinawans, due to their trading relationships with Ming China and their relative isolation from Japan proper, spoke a dialect that made it somewhat difficult to communicate with other Japanese.

The Japanese Shinto religion appears to replace the Taoism of the Chinese. They too believed that a spiritual essence, a *Kami*, resided in all animate and inanimate objects. The emperor is viewed as a Kami, being derived from the sun, but it is a mistake that Westerners assume that he is the Supreme God. Shinto religious practices permeate much of Japanese life.

Buddhism stands out much more and is actively practiced as a religious force among the Japanese in Hawaii.

Death and dying and successful survivorship are of great concern in this life and it is to the teachings of the great teachers of the past that we can turn for wisdom concerning these issues. In his last words, the Buddha emphasized the Dharma (his teachings) and the Dharma would act as our teacher after his death. His words are documented by his disciples in the sutra (Collected sayings of the Buddha) as follows:

> "My disciples, my last moment has come, but do not forget that death is only the end of the physical body. The body was born from parents and was nourished by food; just as inevitable are sickness and death.
>
> But the true Buddha is not a human body:it is Enlightenment. A human body must die, but the Wisdom of Enlightenment will exist forever in the truth of the Dharma, and in the practice of the Dharma. He who sees merely my body does not truly see me. Only he who accepts my teachings truly sees me.
>
> After my death, the Dharma shall be your teacher. Follow the Dharma and you will be true to me.
>
> During the last forty-five years of my life, I have withheld nothing from my teachings. There is no secret teaching, no hidden meaning; everything has been taught openly and clearly. My dear disciples, this is the end. In a moment, I shall be passing into Nirvana. This is my instruction."

We realize the truth of the transient nature of life by carefully reflecting our own lives which are changing constantly as we move towards the unknown realm beyond our preconception of life and death. This changing nature of existence itself, therefore, is an important part of the process of realization of the true nature of life. Basically the sense of Buddha-dharma is not trying to find something one does not have, but simply to discover what one already has, but does not know it. The sense of Buddha-Dharma, therefore, is a matter of discovering and realizing the true nature of life as it manifests itself in its entirety. To Buddhists, life, death and dying take place within a cycle which dynamically refluxes between the realm of the finite and that of the infinite. The teaching of "reincarnation" is conducive of the Buddha-Dharma that we come back again and again into physical existence to find out what is really going on. Everything is in the state of flux until they become infinite or Enlightened. The reality of death and dying which occurs in the dynamic reflux of circumvita proposes that human life is to be projected as 'dangerous opportunity' towards awakening (bodhi) of true spiritual healing.

The following is a classical prescription for a mother who survived the death of her child and gained deeper insight by gradually realizing and accepting the dharma medicine of the transient nature of life:

> A young woman, Kisagotani, the wife of a wealthy man, was suffering profound grief at the death of her child. She took her child from house to house begging for people to heal him. Nobody could do anything for her, but finally, a follower of the Buddha advised her to go see the Blessed One, who was staying at a nearby temple. So she carried the dead child to the Buddha. The Buddha looked upon her with compassion and said , "To heal the child I will need some mustard seeds. Go and ask for four or five mustard seeds from some home where death has never entered." So the poor, demented woman went out looking for a house where death has never entered, but in vain. At last, she was obliged to return to the Buddha. In his quiet presence, her mind cleared and she understood the meaning of his words.

This classical description implies that through personal experience and accepting the truth of these basic dharma of the changing nature of existence and interdependency of life one is faced with the possibility of living life in a true and real way in the reflux of circumvita. Human perception of the flux of life has been projected in a classical denotation of a symbolic letter in Chinese 法 *ho* in Sino-Japanese. It is composed of two radicals: the left radical 氵 signifies either vertical or horizontal flux of water that constantly moves towards its fountain; the right radical is composed of two indicative parts 土 and 厶 to mean human life to be completed by natural as well as necessary consequences of having infinite life. *Ho* is the translation of *dharma* as the primordial power to help all sentient beings attain the infinite life. Dharma flows into the finite life, such as humans, to lead to his ultimate destination of Enlightenment. The Buddha "wishing to expound the Dharma, he smiles and so cures the three pains with various *Dharma-medicine*." (The Three Pure Land Sutras; the Sutra on the Buddha of Infinite Life delivered by Shakyamuni Buddha).

This flow of dharma fills and permeates our life and beyond our temporary existence. The relationship between man and the Buddha as the *medicine king* is interdependent and works throughout our transient life. The human side of existence, or as it is popularly referred to *this shore*, to be crossed by dharma wisdom to get to the *other shore*, that of the Buddha. The *other shore*, inconceivable to us, is the realm of Enlightenment, which has been referred to as *Pure Land*. So, from this *other shore* of the Buddha, we are made to awaken the compassion of the Buddha who embraces us and is leading us to the Buddha's realm of Enlightenment beyond this life and death. When we realize the compassion of Buddha as it has been manifested in the name of compassion, it is called, *Namo Amidabutsu*.

Through the profound meaning of the name, we realize that our life has always been and is now supported by this compassion. The true realization of our life has always been and is now supported by this compassion. The true realization of our life as the recipient of dharma-medicine prescribed by the Buddha spontaneously characterizes the way of life in accordance with the flux of infinite dharma that moves one to oneness of life and death.

The Buddhist culture, the dharma of oneness of life and death has been popularly celebrated by the traditional celebration of *Bon* festivals in China, Japan, Canada, and the Mainland U.S. and Hawaii.

The origin of *Bon* stems from the *Ullambana Sutra*, in which the well-known story of Mokuren, a disciple of the Buddha, is related. Mokuren was very devoted to his mother who had died at an early age. He had been apprehensive of where she had gone after her death. With his extrasensory power of clairvoyance, he found his beloved mother in the world of hungry devils, painfully emaciated as a result of her being miserly in her previous life. Astounded and saddened by the discovery, Mokuren attempted to relieve her pains by taking her some food in a bowl. But no sooner had the mother touched the bowl, then the food turned into a mass of flames. Unable to bear the sight of his mother's pitiful plight, he went to the Buddha for instruction on how to save her. The Buddha said, "The self-centered deeds that your mother committed are so grave that it is beyond our power to extricate her from her state. If you should give offerings to one thousand monks, they would gladly accept your offerings. The effect of your pious offerings to the monks who have done pure deeds will be great, indeed. By the merit of your virtuous deed, you mother will be relieved from the pains of the world of hungry devils. Mokuren followed the Buddha's instruction and the mother was immediately freed from the suffering world. Mokuren and the disciples of the Buddha clapped their hands and began dancing in joy. This is the origin of the *Bon* Dance. In Japan, *Bon* service was held in the palaces of the Emperors and temples of the nobility. During the reign of Emperor Saimyo, *Bon* services were held at the Asuka Temple in Nara, during the month of July. During the Heian Period (900-1200) Bon was widely observed by the masses. Until this time it was only among the upper class that *Bon* Services were held. In the Muromachi Era (1400-1430), the *Nembutsu* (Namo Amidabatsu) *Odori* (dance) was first introduced during the service.

Immigrants from Japan (the first generation Japanese) transplanted the tradition of *Bon* festivals to Hawaii one hundred years ago. *Bon* is the time for visiting graves. When life is so mobile and transient as it is today, there is hardly a place where one may call his permanent home. But the graves are the places of permanent rest for the physical remains of the dear ones who are no more. The cemetery may be considered as a spiritual abode where all members of the family, some living in distant places, return at least once or twice a year. Thus, *Bon* is also a time for the reunion of family members and kinsmen. The thoughts that come to us are the memories of those who are no more with us physically. But perhaps because of their bodily absence, we appreciate what they had done for us and their memories become precious all the more.

Bon reminds us also of the importance of charity. It was because of Mokuren's offerings of the Buddha's disciples, that his mother was released from her greed and the resulting hunger and thirst. To undo the wrong, something positive had to be done. Greed stems from ignorance and delusion. As we fail to see that, we are part of the

whole and that we came into mere temporary beings by concurrence of causes and conditions, we are predisposed to cling to ourselves as an abiding, stable and unchanging existence. We become egoistic, self-centered and selfish. We feel as though the whole world evolves around us. 'Ullumbana', the transliteration of which become 'Urabon' — Bon for short — means "being hung upsidedown". Physical pains may result from bodily inversion. But the delusion of inverted views is the more fundamental cause of all evils and sufferings. The deeds of pure dana (absolute altruism) perform a double purpose of helping others and purging oneself of egoism. Mokuren's dana from the pureness of his heart to the great assemblage of monks did serve these purposes.

Bon tradition is the Dharma-medicine that individually as well as collectively, heals grief and lamentation derived from profound experiences of transient existence of human life and it leads us to the realization and awakening to the world of infinite life, ever reflecting upon the temporary life here and now.

Biomedical Ethics

The field of biomedical ethics is not new. Most biomedical physicians have been taught that they should practice according to the moral precepts of the ancient Greek Hippocratic oath. Approximately thirty years ago however, many became aware of the serious shortcomings of its teachings.

Pellegrino, a leading physician bioethicist, stated: "In biomedical ethics, this transcultural challenge is vastly complicated because medical science and technology, as well as the ethics designed to deal with its impact, currently are Western in origin. They are deeply ingrained with three sets of values distinctly Western—the values of empirical science, principle based ethics, and the democratic political philosophy. Such values are often alien, and even antipathetic, to many non-Western world views".

It is this foundation of biomedical ethics that needs to be challenged. Western assumptions that all human beings are circumscribed, independent and rational individuals is not strongly shared with non-westerners. For example, the Confucianistic person tends to look at the world and life much more through a sense of well being and happiness of others, particularly those of parents and others in the family. This built-in perception of selflessness for many Asians makes it truly difficult to deal with and accept western concepts of autonomy, truth telling, even confidentiality. Altruism for the Asian must concern itself much more with concepts of paternalism. American's notion of justice must be tempered and moderated to deal with its unique concept of the relatively selfless "non-western" person. It is interesting to note that one is currently seeing increasing attacks upon contemporary biomedical ethical practices. Medical dilemmas related to managed care, commodification of human life, medical rationing, even human dignity and rights require that non-western perceptions and views involving alternative ethical principles must be promulgated and promoted to join the essentially western voices heard today.

Physicians around the world must all deal with the terminal stages of life, when death occurs. Science will continue to contribute newer approaches for relieving pain and suffering and to prolong the life of the patient but it will never be able to deny death. All physicians are taught to recognize when death becomes inevitable and further medical intervention is futile.

Nuland, a physician and writer, points out that:

> Each one of us needs a guide who knows us as well as he knows the pathways by which we can approach death. There are so many ways to travel through the same thickets of disease, so many choices to make, so many stations at which we may choose to rest, continue, or end the journey completely — until the last steps of that journey we need the company of those we love, and we need the wisdom to choose the way that is ours alone. The clinical objectivity that should enter into our decisions must come from a doctor familiar with our values and the lives we have led, and not just from the virtual stranger whose superspecialized biomedical skills we have called upon. At such times, it is not the kindness of strangers that we need, but the understanding of a longtime medical friend. In whatever way our system of health is reorganized, good judgment demands that this simple truth be appreciated.

Acting to prolong the life, by attempting to relieve the pain and suffering of the patient, what are the physician's ethical responsibilities during this end stage for life? For those Chinese and Japanese patients steeped in their traditional beliefs and practices, the physician may find it easier for them to confront and accept the inevitability of death. For Buddhists, life-death exists on a continuum, for the person merely passes from the physical state of being into another, from nature into that of the supernatural. Freed of another human desire, the Buddhist can readily "give up" life to move onward.

Even regarding questions of euthanasia, traditional Chinese and Japanese patients can find solace and comfort in their traditional native belief systems. Letting die or refraining from taking action, passive euthanasia, should pose no ethical problems for most physicians, for when it is undertaken to induce the painless death of a person for reasons assumed to be merciful, it represents one of the traditional responsibilities of all physicians.

However, the concept of active euthanasia, taking action to promote and hasten the death of an individual would appear to be an act of killing. However, in contemporary medical practices, the patient may be suffering so much pain that death may in fact be the only merciful recourse remaining. Not uncommonly, the request for death may be initiated by the patient, the so called plea for assisted suicide. Again, these Asian belief systems would not prohibit the physician in supporting these activities, if this act is based purely upon what the patient needs or requests.

Any death invariably involves survivors. It is extremely important for families to be involved in many of the medical decisions regarding the dying patient. The question of a living will to define what limits are to be set on the medical support and treatments and a durable power of attorney for health care, permitting an agent to make medical decisions for the patient should he or she become incapacitated, may be useful, but should never overlook the importance of the extended family involvement in these crucial matters during the terminal period of life. Concepts of family and filial piety must be promoted throughout this period to ensure that these needs are fulfilled for those who are surviving.

This family centered decision sharing process is especially critical for these Confucianistic people. Physicians must ensure that critical information is widely communicated and shared with the survivors. This is especially true, for acknowledging the stoicism and laconic nature and personalities characteristic of these Asian people, one cannot assume that all of the critical medical information will be freely shared and discussed among them. Each member of the surviving group may have distinctly separate and deeply personal and heartfelt needs to address during these crucial days of dying. Physicians must recognize their responsibility toward ensuring that other resources to assist and support the survivors must be involved

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Death with Dignity: There's Plenty More that We Can Do

R. Gary Johnson MD*

The medical profession has seen an accelerated interest in end of life decision making and terminal care. The growing need for attention in these area requires more of the art of medicine - the human and compassionate side of medicine as opposed to the high technology side.

Everyone knows or at least has heard the facts and statistics. The population of the United States and most other "developed" nations is aging. The group eighty-five and older is growing at an unprecedented rate. Control of certain infectious diseases and public health measures over the last half century are largely responsible for this demographic shift.

The challenge to the medical profession now and in the immediate future is to better respond to the needs of an elderly population with chronic debilitating and endstage conditions. The financial and societal implications of this challenge were addressed by Dr Patricia Blanchette in the April 1995 issue of the *Hawaii Medical Journal.* The points raised in that article are even more compelling a year and a half later. The frail elderly with chronic and terminal medical conditions can be cared for in ways that are both fiscally sound and personally satisfying, tailored to meet the individual's needs.

For physicians to manage these chronic problems well requires a change in approach. The traditional 10 to 15 minute office visit is not adequate to meet the needs of this population. The scope of care is expanded to include the office, hospital, nursing home, hospice, and most importantly, the home. The physician becomes less the autonomous decision maker and more a team member, communicating with various professional disciplines and caregivers. The ability to be a good team member and to balance the expertise of different people is a crucial part of caring for people with chronic and terminal conditions.

Many physicians, some may argue the majority, do not handle this end of the continuum of life that well. There are many reasons for this. There is real paucity of formal medical education in the areas of death and dying, not to mention the management of chronic conditions generally. The advent of so much new technology so rapidly and the emphasis on this in medical education leads many physicians to feel that they should be able to fix anything. High technology should be used to the very end and if this fails, it is time to walk away. Residency programs are great in teaching how to run an intensive care unit, but what happens beyond the hospital door remains, for many, a big mystery. Even in an office practice, once a diagnosis of a chronic incurable condition is made, frequently the physician-patient interaction stops at this point. An example: a patient, after a complete and thorough workup, is diagnosed with Alzheimers Disease; the family is told this, given a couple of pamphlets, but no follow up is scheduled because "there is nothing more that we can do." Experience in working with elderly people with chronic and terminal conditions shows that the point where "there is nothing more that we can do" is actually where the real work begins.

Communication and availability are crucial to successfully take care of a terminally ill person. It is important for the physician to communicate clearly with the patient and family what to expect and what can be done. Often the patient is told "I'm sorry, you have (for instance) cancer, we have no treatment to offer." A better approach is to say "I'm sorry, you have a condition that we can't cure. However, there are many things that we can continue to do to make sure that you can be comfortable and pain free."

There are many issues to address at the beginning as well as during the course of a terminal illness. First, if no previous discussion has occurred, an active discussion about life sustaining measures needs to be addressed. The general public usually has little understanding of what the implications of resuscitation, hydration, and tube feeding are. Asking only "do you want us to do everything if an emergency occurs?" will not lead to an informed response. Giving the family solid information about the futility of resuscitation and tube feeding in such conditions will permit much better decision making. Obviously it is much better to face these issues early rather than when the crisis occurred. All too often patients with advanced metastatic cancer end up in an intensive care unit being intubated and resuscitated because no one had discussed the options beforehand.

The case of a patient with advanced Alzheimers Disease illustrates this well. Once the patient starts to develop dysophagia, families are confronted with having to decide whether to tube feed or not. One approach is to explain to the family that artificial feeding will not reverse the underlying process and in fact will increase the likelihood of suffering by interfering with the natural process and in fact will increase the likelihood of suffering by interfering with the natural process of death. Many families have the misconception that without artificial feeding or hydration, the patient will experience a slow, painful death. Explain that the opposite is true and that the patient will have a comfortable and dignified death without artificial support. Often families do not want to pursue aggressive measures but are afraid to speak out. When the physician speaks to these issues directly, providing more guidance and education, this puts the family more at ease to make choices. Families are already stressed: they need more direction from the physician than being asked "do

* Chief, Department of Geriatric Medicine
Straub Clinic & Hospital, Inc.

you want this treatment or not?"

Most people are taken care of in the home; patients and families generally prefer this to institutionalization. Making use of community resources during this period is great help to both the family and physician. A hospice program is extremely beneficial. Often hospice is equated with cancer care; however the same philosophy applies to any endstage condition, such as advanced dementia or Parkinson's disease. A hospice can provide skilled nursing services; nurses aid services, respite care, social services as well as coverage for medications and certain supplies. Nursing services are especially helpful in working with the physician to modulate medications for pain.

Patients at this point rarely fear death itself. They fear more the potential of having pain and suffering during the dying process. Unfortunately, many patients do not have these fears addressed and do not receive the necessary medications to relieve their pain. A recent article in the *New England Journal of Medicine* describes this well. Adequate treatment of pain in terminal conditions is not given sufficient attention for many reasons: lack of education, inappropriate concern about the effects of narcotics to name two. Concern about addiction in a patient with a terminal illness really approaches the absurd.

Depression as a co-morbid condition in a chronic disease and terminal illness is also under recognized and treated. Depressive symptoms are often dismissed as being an accepted part of the condition thus not meriting attention. In many cases an antidepressant can be very beneficial in improving the quality of life and as an adjunct to treating pain.

The following illustrates a "best case scenario." An 80-year-old man with endstage Parkinson's Disease and dementia is cared for at home by his wife and a hired caregiver. The physician makes routine home visits to provide support and guidance in the day to day care. As the disease progresses, the patient develops symptoms of dysphagia. Discussions between the wife and physician on previous occasions have led to the decision not to tube feed or do other aggressive measures. As the dysphagia represents a significant change in the prognosis, a referral to Hospice is made to assist with the terminal care. The physician prescribes liquid morphine to have on hand in the event of respiratory distress probably due to aspiration. Visits are made by both the hospice nurse and the physician to provide additional support. The wife is instructed to give as much morphine as is necessary to relieve the respiratory distress. After several days, the patient passes away quietly at home with the wife during the days that follow. A much preferred passing to what could have happened without adequate preparation: years of meaningless existence in vegetative state with a feeding tube in a nursing home.

The need for this kind of care will only grow in the future. Physicians can and should play such an important part in the care of dying patients. Despite the availability of excellent paraprofessionals, patients and families ultimately look to the physician for real guidance and decision-making. There is so much to do medically during the dying process: aggressive relief of pain, aggressive treatment of depression, aggressive use of community resources. Being at the bedside of a dying patient, if to do nothing else but listen, can be the greatest practice of the art of medicine.

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Euthanasia: Murder or Mercy?

Continued from Page 272

women to find doctors who would perform abortions in those days before Roe vs. Wade. Battin saw religious institutions as the right place for people to come. A religious community is the only place whose central focus is the meaning and value of life, and the disturbing fact of death which challenges all claims to meaning and value.

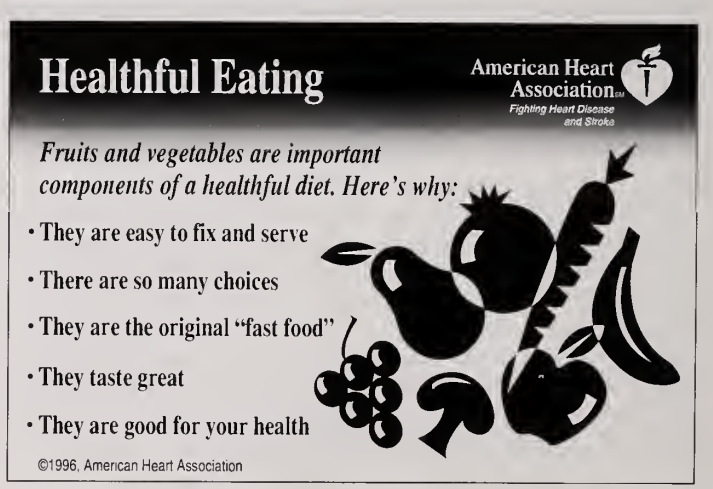
The work of Ralph Mero and others clearly indicates that some of our clergy are hearing the call to respond to those suffering people in need of aid in dying . Such work is to be highly commended and extended by others of us as we are able.

The ultimate goal is to enable every person not carried away by sudden death to make informed choices about what happens to them in the last stages of life. We will not all choose the same way. There must be room for those who choose to live even in the face of frightful pain and suffering and for those who choose an earlier point of death.

The Greeks gave us the word euthanasia. It is a lovely word that means simply, good death. Only if we are given the full legal right to make the choice of how we shall die, and to get the assistance of our physicians in carrying out that choice—for existence to continue by every means possible or for death to take us out of our misery—does the good death, euthanasia, become possible for all of us. It is my hope that every person will be able to have a good death.

Editor's Note:

Ken Phifer now serves as Senior Minister at First Unitarian Universalist Church in Ann Arbor. He received a B.A. in history at Harvard and attended the University of Chicago Divinity School. He served as Scholar in Residence at the Ecuminical Institute for Jewish Christian Studies, as well as teacher, advisor and Minister at several institutions on the mainland. But, Ken Phifer has firm connections to Hawaii: he taught at Mid-Pacific Institute, has lectured at the Pali Unitarian Church and his parents live in Hawaii at Pohai Nani. Mahalo, Ken for sharing your words of compassion with us.



Care of the Dying at the John A. Burns School of Medicine University of Hawaii

Leslie Q. Tam PhD*

In the first year of medical school, our students spend one-half day a week (15 weeks) in a community hospice experience. They go through a 20-hour orientation program, either at St. Francis Medical Center or at the Queen's Medical Center. They are then assigned their own patient, whom they visit once a week for the 15-week period. Often, students develop strong relationships with terminally ill patients and continue the hospice experience until the patient dies. It is a rich and touching experience for some students, coming early in their medical education.

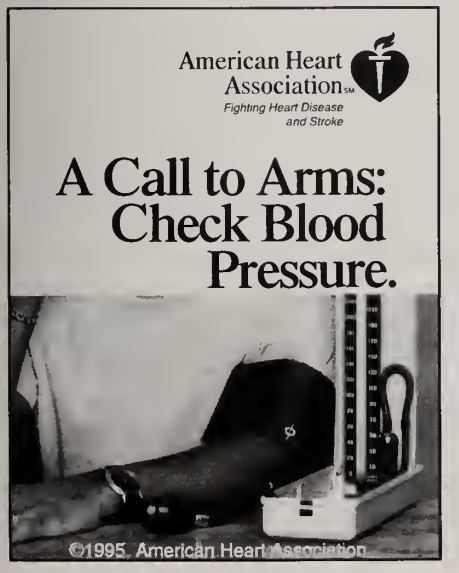
During the first two years, students meet in tutorials and study a total of 70 different health care problems. Among these problems are patients and their families who must deal with death and dying. Some examples of these situations are a 50-year-old nurse with breast cancer, an adult male with transitional cell carcinoma, and a lone immigrant to Hawaii with colon cancer.

In these tutorials, the students are encouraged to discuss not only the biological and clinical aspects of the problems, but the populational and behavioral aspects of the case, including death and dying. Many of these discussions are truly profound. Some are superficial, depending on the makeup of the tutorial as well as the maturity and readiness of the student to discuss these issues, and the ability of the tutor to facilitate discussion.

Our medical school has also offered colloquia by Max Botticelli, MD, S.Y. Tan, MD, Mitsuo Aoki, DD, and Kenneth Kipnis, PhD on subjects such as "Death and Dying," "Palliative Care," and "Ethical Issues in Death and Dying."

While we have no formal courses on "Care of the Dying" or "Choice in Dying," our students are exposed to these problems by the methods described above. Whether or not these experiences are effective is unknown at this time.

Editor's Note:
Beginning this fall, ten medical schools across the country will develop and test models that will integrate death and dying into their existing programs. Regrettably, the University of Hawaii is not one of these participating schools. At the end of the five-year project, Choice in Dying, the funding agency based in New York City, will compile the results into a technical manual that will then help other schools integrate similar death and dying teaching into their programs. Further information can be obtained from Choice in Dying, 200 Varick Street, New York, NY 10014. Fax 212-366-5337. Phone 212-366-5540.



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To Die or Not to Die - Is that the Question? Educating Physicians About End-of-Life Care

Richard MacDonald MD

Introduction

The past three decades of technological advances in medicine have produced many benefits in the way of curing illness and prolonging quality life, when applied appropriately in acute injury for disease. However, some of these same developments, when used inappropriately in those conditions associated with degenerate processes without possibility of cure, can lead to prolongation of the dying process with associated poor quality of live. Little is taught in medical and nursing schools, or in residency programs, about end of life care. The difficult decisions to be made by the patient, her or his loved ones, and the medical care team present personal, ethical and emotional quandaries. If physicians are to provide patients with informed answers to questions about avoidance or withdrawal of treatment, palliative care, refusal of hydration and nutrition, as well as discussing options open to the patients wishing to hasten death, much more education in these areas must be included in the training of those who will be treating terminal illness. Many physicians and patients now share the opinion that the continuum of care for such hopeless situations should include physician assisted death as one of the options to be considered.

Discussion

The twentieth century has seen many remarkable advances in technology, most notably in the field of medicine. Much of the progress has taken place in the past 25 years, altering the entire approach to many medical conditions. With these changes, the venue for caring for those with terminal illness has changed from the home to the intensive care units of tertiary care hospitals. Due to this medicalization of dying, it is estimated that over 80% of patients are hospitalized at the time of death, in sharp distinction to the 25 to 40% just four decades earlier.[1]

Since the early 1970's, when ventilators became available to maintain life in cases that, without such advanced life support technology, would have little or no possibility of survival, the approach to end of life care dramatically changed. The opportunity to save many patients suffering acute trauma or illness, with accompanying cardiopulmonary compromise, was welcomed. Numerous patients have survived serious illness and injury, returning to active lives, with longevity and quality of life that was close to that expected prior to hospitalization.

There was an insidious development secondary to the rapid number of inventions in the medical sphere. Prior to the advent of this technology, it was usual to care for terminally ill patients in the home surrounding, after exhausting the limited armamentarium of life-sustaining therapies then available. If life expectancy was measured in only weeks or months, compassionate attention to comfort of the patient was the norm, with analgesics freely prescribed to ensure adequate pain control. However, in the effort to prevent death in those for whom there was "no more to be done," the technology that had been developed for short term use in acute, remedial situations, was increasingly applied to patients suffering terminal malignancies with widespread metastases and those with severe neurological damage. The latter included cerebrovascular accidents and head trauma with deep, permanent coma, in what came to be called persistent vegetative state. This misapplication of technology lead to an ever increasing number of patients totally dependent on ventilators and/or other life-supporting medical devices, with no hope of recovery.

As life expectancy increases due to improved nutrition, health habits, and medical progress in available treatments for preventing or curing many infectious illnesses, the number of older Americans who suffer malignant disease has also increased. When in terminal stages of cancer, as well as with some neurological conditions, such as Alzheimer's disease and amyotrophic lateral sclerosis, it appears that the patient is frequently ready to accept the inevitable conclusion of such illness before the physician may be willing to discontinue efforts to extend life. Technology may be applied to these chronic disease states when it is clear that no cure is expected, and that no possibility exists of the individual returning to a quality of life acceptable to her or him.

Unfortunately, little in the medical curricula of most universities helped prepare physicians for these situations. In reviewing textbooks considered to be the best available in their fields, there is great attention paid to details of diagnosis, prognosis, medical and surgical treatment, and technological applications for even the rarest of conditions. There is, however, virtually nothing included about what to do for the patient when further curative efforts are futile. Personal investigation and conversations with faculty of medical schools and residency programs revealed that few medical schools have any required courses dealing with dying and death. Some have a few "interest" lectures on the subject, but required courses are rare. Similarly, very few residency programs expose the young physicians to such rotations as long-term facilities or hospice care.[2] There are a few that have the opportunity to follow a patient or two in a hospice program, but no compulsory exposure to terminally ill patients in long term care facilities or home hospice care is found in the vast majority of residents training, even in the oncological specialties. Until very recently there were few continuing education programs sponsored by organized medical groups, or by hospital staffs, that included presentations discussing end of life care. In November, 1996, the AMA ethics division announced that a program to teach physicians skills for quality end-of-life care is being organized.[3] This appears to have happened only after that organization became alarmed at the success of grass roots efforts to effect changes in laws that would permit some patients, with no hope for recovery, the option of requesting assistance in shortening the time of dying.

As a result of the paucity of efforts to teach physicians about dying and death, the numbers of patients who died while still connected to life-supporting equipment seemed ever-increasing. The SUPPORT

study reported in *JAMA* confirmed much of what is wrong with the care of terminally ill patients.[4] Physicians either did not know, or failed to follow, the wishes that patients had expressed verbally or in advance directives. As a result, many of the cases followed revealed continued application of technology not desired by the patients, yet with a surprisingly high percentage suffering pain in the last week of life. Even with the expenditure of millions of dollars of grant money in an effort to intervene, with specially trained nurses advising the physicians as to patient preferences, no improvement in physician behavior or in the dismal results occurred.

Clearly, those in didactic medicine need to redirect some of their efforts to teaching appropriate care for those with incurable illness. It is the opinion of many physicians and the majority of patients that those who are dying with chronic disease, for which all available methods of treatment have been considered and/or undertaken, and for whom the very best in palliative care has failed to provide the quality of life that the patient finds acceptable to continued existence, that another option could and should be offered. That option, as an alternative to continued suffering secondary to the prolongation of the time of dying due to the application of various futile treatment modalities, is physician assisted death. The few patients for whom palliative and hospice care does not suffice deserve this consideration. The United Stated Court of Appeals for the Ninth Circuit, which encompasses all nine western states, agreed with this contention, by a majority vote of 8 to 3, in a decision filed on March 6, 1996. The final paragraph of the majority opinion states succinctly that an individual has the right to make decisions affecting life and death. That Court also dealt with the proscription placed on such action as hastening the time of dying by those with strong religious beliefs that "only God can take one's life." The Justices stated that "Those who believe strongly that death must come without physician assistance are free to follow that creed, be they doctors or patients. They are not free, however, to force their views, their religious convictions, or their philosophies on all other members of a democratic society, and to compel those whose values differ with theirs to die painful, protracted, and agonizing deaths."

Although there is much to be done in the way of improving teaching about end of life care and decisions, there is some recent improvement apparent in the awareness of physicians about patient preferences with regard to terminal care. It is my belief that the increasing dialogue in our society, and in medical circles, regarding terminal illness, has resulted from the demand, by certain patient advocacy organizations, that more autonomy in decision making be offered to patients. It has been reported that more attention to teaching about palliative care, pain management and the need for earlier and more frequent hospice referral, is occurring in Oregon. This may be attributed to the extensive exposure of all the citizens in that state to the arguments, both pro and con, preceding the passage of Measure 16 in November 1994. When the injunctions preventing implementation of that law are finally resolved, there will be an opportunity to establish guidelines and safeguards for physician aid-in-dying. Hopefully, with improved teaching about end of life care for all health care professionals, the number of patients who fail to have a quality of life deemed by them to be commensurate with continued life, will be minimal.

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Editors Note:

Richard MacDonald, MD, since his 1993 appointment as Medical Director of the Hemlock Society USA, researches and writes on medical aspects of physician aid-in-dying, provides guidance on medical matters to the National Board of Directors and to local chapters, and creates dialogue and increases communication between Hemlock and the medical community. Born and educated in Canada, he has practiced family medicine in Canada and California for over forty years. Extensive experience in communications has included his "Doctor of the Air" program on the Canadian Broadcasting Corporation and, more recently, on KPAY, Chico, California, and a "Health Break" series for local television. Participation in many national medical organizations meetings will advance the mission of Hemlock by educating the medical and allied health professionals in the concepts of appropriate end-of-life decisions to provide their patients with the choice of death with as much comfort and dignity as possible. Included in his current memberships are the Society of Teachers of Family Medicine, The Gerontological Society of America, the American Association of Bioethicists and the Society for Health and Human Values. He has traveled extensively for Hemlock, speaking to both medical and lay audiences, concentrating especially on delivering presentations to medical students and residents who will be involved in treating patients with terminal illness. As this "most important bioethical issue of the 1990's" continues to be debated in both medical and lay circles, he will be expressing the philosophy of the Hemlock Society USA and hopes to see improved care and caring for those with terminal illness, with more adequate pain control, earlier and more frequent referral for hospice and palliative care, and the possibility of the choice of physician aid-in-dying for those few patients for whom even the best care fails to provide a quality of life acceptable to the dying patient.

Richard MacDonald, MD and Faye Girsh, executive director of the Hemlock Society—USA, attended the 9th annual meeting of Hemlock USA in Denver, November 9-11. The Conference on Physician Aid in Dying presented the latest developments from legal, medical, legislative, nursing and family perspectives. More on this in later issues of the Journal. Thanks to Dick and Faye and the wonders of e-mail and faxes, we have their manuscripts for this special issue. Mahalo again, Dick and Faye.

A View of Death and Dying Among the Chinese and Japanese

Continued from Page 290

in these final days of life, such as the need for spiritual, legal and other counselors. The medical services represent only a portion of what each patient needs in navigating this final passage of life.

To ensure satisfactory closure involved in this process of letting go for everyone, it is critical that the physician spend sufficient time to advise, reassure, support and comfort not only the patient, but must also extend these services to the family and other survivors as well.

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How Hawaii's Doctors Feel about Physician-Assisted Suicide and Euthanasia: An Overview

Lorene K. Siaw* MD and S.Y. Tan MD, JD**

We polled, by questionnaire, all doctors and medical trainees in Hawaii (n=3,017) to determine their attitudes towards physician-assisted suicide, euthanasia and other end-of-life medical issues. One thousand and twenty-eight (34.1 %) responded. Medical trainees did not differ significantly from practicing physicians. Only a minority of respondents (15.6%) were willing to assist a terminally-ill patient to commit suicide. An even smaller number (9.8%) would perform active euthanasia. On the other hand, an overwhelming majority would withhold (97.6%) or withdraw (78.6%) life-support upon request. Most doctors (88.0%) were also willing to administer high doses of narcotics for pain relief, even if such therapy hastened death. About half the doctors felt that physician-assisted suicide and active euthanasia may be justified under some circumstances, although most were unwilling to personally carry out these acts. Catholic, Filipino and Hawaiian/Polynesian doctors were statistically less likely to approve of or perform physician-assisted suicide or active euthanasia.

For much of this decade, both the medical and lay communities have actively debated the ethics of "mercy-killing". In November 1994, voters in Oregon voted to legalize physician-assisted suicide, after previous initiative votes failed in Washington and California.[1] Earlier this year, two appellate courts separately held that mentally competent patients who were terminally-ill had a constitutional right to physician assisted suicide.[2,3] Going one step beyond, the Northern Territory of Australia recently legalized the practice of euthanasia,[4] thereby joining the Netherlands[5] in allowing physicians to actively end, with consent, the lives of terminally-ill patients.

Are doctors for or against such practices? Published surveys[6-11] have generally found that a substantial minority in the medical profession is supportive of physician-assisted suicide and a smaller number of active euthanasia. To date, no data are available on the opinions of Hawaii's physicians. We therefore undertook such a survey concerning various end-of-life medical issues, including physician-assisted suicide and active euthanasia. Given Hawaii's limited and diverse population, we were able to mail questionnaires to all the physicians in the state, and to analyze the results for ethnic and religious differences.

Methods

We mailed an anonymous questionnaire to all physicians, residents and medical students in Hawaii in September 1995. The questionnaire was patterned after that used in a recently published survey of Rhode Island physicians.[11] Two months later, we completed a second mailing. All results were entered into a computer data base and analyzed by SAS statistical analysis program. Chi-square testing was performed to determine statistical significance among the various demographic groups.

The questionnaire consisted of two main parts. In the first part of the questionnaire, we posed several clinical scenarios involving a hypothetical terminally-ill competent patient with lung cancer. A simple *yes/no* response was sought. In scenario 1, the patient requests not to be intubated, although it appears he will not survive otherwise (withholding treatment). Scenario 2 describes the same patient who requests narcotics for pain relief in doses that might hasten death through respiratory depression. In scenario 3, the patient, having been emergently intubated by another physician, now requests that the endotracheal tube be removed (withdrawing treatment). Scenario 4 describes the patient's request for a medication prescription with the specific intent to end his life (physician-assisted suicide). In the 5th and last scenario, the patient seeks death via a lethal injection to be administered by the physician (active euthanasia).

For each *yes/no* response, the surveyed physicians were ask to select, in rank order, various reasons why they so decided. The analysis of these results will be reported in a later communication.

In the second part of the questionnaire, we asked about general attitudes towards physician-assisted suicide and active euthanasia. We asked whether physicians would approve of these practices in some circumstances (unstipulated), and whether they would personally perform such acts. We also asked whether they had actually performed these acts in the past.

Results

Three thousand and seventeen physicians, residents and medical students were polled. Of these, 1,028 responded for an overall response rate of 34.1 %. Two hundred and seventeen (21.1%) of the respondents were trainees. There were 139 medical students and 78 residents. Their views did not differ significantly from those of practicing physicians.

Demographic data of the respondents are shown in Table 1.

The responses of physicians (this term is used to include residents and medical students) to the five described clinical scenarios (Part 1 of questionnaire) are tabulated in Table 2 and shown graphically in Figure 1. The vast majority would withhold (97.6%) or withdraw (78.6%) treatment, or give narcotics for pain relief even if they hastened death (88.0%). However, only a minority would perform physician-assisted suicide (15.6%) or active euthanasia (9.8%).

Table 3 tabulates the general attitudes of the respondents (Part 2 of

* Chief Medical Resident
University of Hawaii
Integrated Medical Residency Program
** St. Francis Medical Center
University of Hawaii
John A. Burns School of Medicine
Honolulu, Hawaii

questionnaire). A slight majority would approve of physician-assisted suicide (60.0%) or active euthanasia (58.6%) under some (unspecified) circumstances. A much smaller percentage would personally perform these acts (28.8% and 27.6% respectively). Four percent of respondents indicated that they had assisted their patients to commit suicide, and 3.5% said they had personally performed active euthanasia.

Table 4 depicts ethnic and religious differences. Catholics (n=195) were the only religious group that consistently showed a statistically lower rate of support for physician-assisted suicide or active euthanasia. Among the various ethnic groups, Filipino (n=41) and Hawaiian/Polynesian (n=35) doctors showed a definite trend towards being less likely to approve of or perform these acts. This trend persisted even after removing Catholic religious belief as a confounding variable. Non-Filipino Catholics appeared more likely than Filipino Catholics in their approval of physician-assisted suicide (45.3% vs 30%) and active euthanasia (42.3% vs 24.1%). In contrast to the religious and ethnic differences observed for physician-assisted suicide and active euthanasia, there were no differences observed for withholding and withdrawing life-support, and prescribing narcotics for pain relief.

No statistical differences in physician response were detected for subgroups classified by age, sex, specialty, years in practice, and place of practice.

Discussion

1,028 physicians participated in this survey, making it one of the largest series, second only to Oregon's. This figure represents 34.1% of Hawaii's entire physician population. Unfortunately, we were unable to obtain reliable data on the demographics of Hawaii's physician population so that we could ascertain and confirm sample-match.

The results of our survey, the first carried out in the state of Hawaii, indicate that the vast majority of physicians would withhold or withdraw treatment in accordance with the request of a terminally ill patient. Likewise, Hawaii's physicians are quite willing to administer narcotics for pain relief, even in doses that may hasten death. These practices comport with generally accepted ethical precepts[12] set forth by professional organizations such as the American College of Physicians[13] and by the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research.[14] Our results closely parallel those obtained in the 392 physicians of Rhode Island who were surveyed using a similar questionnaire.[11]

Regarding assisting a patient to commit suicide, our figure of 15.6% is virtually identical to that obtained in a much smaller and defined group in Florida.[10] There, 16% of physicians (360 medical faculty and trainees at the University of Miami) stated that they would perform the act, compared to 15.6%-28.8% of our physicians. In Rhode Island, only 9% would do so.[11] In contrast, the figure was a third in Michigan,[7] 40% in the state of Washington,[9] and nearly one half in Oregon.[6]

Fewer than 1 in 10 physicians in the state of Hawaii would personally perform active euthanasia when faced with a hypothetical patient making such a request. Published figures from other surveys range from 1 % in Rhode Island[11] to 33% in Washington.[9]

Oregon's physician survey on physician-assisted suicide is the largest yet published, and involved 2,761 physicians who were deemed eligible to prescribe a lethal dose of medication.[6] Sixty percent thought such an act should be legal in some cases; 46% might be willing to prescribe, and 31% were unwilling on moral grounds. Although a similar percent of our respondents would approve of physician-assisted suicide under some unspecified circumstances, Hawaii's physicians appear much less likely to become personally involved, especially when confronted with a specific case scenario. These differences appear to be real; 36 physicians in Hawaii reported that they had performed physician-assisted suicide (4%), a frequency almost half that of Oregonian physicians (7%).

Why is it that under some unspecified circumstances, slightly more than half of our physicians could approve of both physician-assisted suicide and active euthanasia, yet only about a quarter would personally perform these acts? This disparity between "general approval under some circumstances" and actual performance has been noted in other surveys.[6,9] We attribute the reluctance of personal involvement to cultural and religious factors, prior medical teaching, the lack of knowledge of how to proceed, the fear of criminal liability, and insecurity regarding the true meaning of such patient requests. This last factor may prove determinative. In a recent survey of oncologists, for example, Emanuel et al[15] found that 45.5% agreed with physician-assisted suicide for cancer patients with unremitting pain, but this figure dropped to 35.5% for patients with functional debility, to 22.9% when the reason was burden on family, and to only 18.1% when life was viewed as meaningless.[15]

We identified ethnic and religious differences in our study. Catholic physicians as a group were consistently less likely to approve of or carry out physician-assisted suicide and active euthanasia. The same generally held true for Filipino and Hawaiian/Polynesian doctors, although with somewhat less statistical confidence. The ethnic differences appear real, persisting even after removing Catholic religious belief as a confounding variable. On the other hand, the views of these doctors did not differ from the entire group on the issues of withholding and withdrawing treatment, and prescribing narcotics for pain relief. Given Hawaii's heterogeneous population, divergent views are not surprising, especially since attitudes towards life, death and the dying process are deeply rooted in one's heritage and upbringing, and susceptible to both cultural and spiritual influences. Our results, however, do invite the inquiry into whether other end-of-life issues, e.g., hospice care and cardiopulmonary resuscitation, are race- and religion- sensitive, and whether these views are comparably shared by doctors as well as their patients.

How physicians in Hawaii feel about physician-assisted suicide and euthanasia is highly relevant, since they will be the ones called upon to effectuate such acts. Will Hawaii legalize these acts? At the federal level, appellate courts[2,3] in the second and ninth circuits have recently ruled that competent terminally-ill patients have a constitutional right to physician-assisted suicide. These cases have been appealed to the U.S. Supreme Court, which has agreed to hear oral arguments in January 1997. Its decision may well be a landmark in the annals of medical jurisprudence. Or it may take a neutral stance by deferring to the states for individual adjudication or legislation.

In 1993, state representative Terrance Tom, then chair of the House Judiciary Committee, conducted public hearings on these issues. Based on his findings, he rejected any form of euthanasia for the State of Hawaii, and instead introduced legislation to ensure that knowledge of modern pain-management therapy and comfort care was made available to every terminally-ill patient in need of such relief. Interestingly, Oregon's healthcare systems have responded to its 1994 pro-suicide vote, currently challenged in court, by instituting these same measures. If Hawaii's healthcare professionals would heed this "wake-up" call, they too can provide better comfort care to their patients at the end-of-life.

Acknowledgments

We thank Dr T. Fried and Dr M. Stein for allowing us to use their questionnaire in this survey, Dr Helen Petrovitch and Clifford Li of the Honolulu Heart Program for helping us with the statistical analysis, and Gary Belcher for the art work.

Continued on Next Page

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Table 1.—Demographics of Respondents (n=1.028) by Percent

Age:	**Years in Practice:**
<40 years - 31.8	<10 years - 28.4
40 - 59 years - 45.9	10 - 19 years - 26.3
60+ years - 22.3	20+ years - 45.4
Sex:	**Ethnicity:**
Male - 75.4	Caucasians - 48.5
Female - 24.6	Japanese - 17.3
	Chinese - 14.3
Level of Training:	Other Asians - 10.2
Practitioner - 78.8	Filipinos - 4.0
Resident - 7.6	Hawaiian/Polynesian - 3.4
Medical Students - 13.5	Other - 2.3
Specialty:	**Religion:**
Medicine - 42.6	Catholic - 19
Surgery - 17.4	Protestant - 14.1
Pediatrics - 8.0	Christian - 13.8
Psychiatry - 6.3	Buddhist - 5.6
Others - 25.7	Jewish - 4.4
	Episcopalian - 4.2
Area of Practice:	None - 18.1
Urban - 68.1	Other - 20.8
Suburban - 19.7	
Rural - 12.3	

Table 2.—Survey Results of 1,028 Hawaii Physicians* Regarding a Hypothetical Terminally-Ill Patient

Withhold treatment	97.6%
Use narcotics to relieve pain even if death hastened	88.0%
Withdraw treatment	78.6%
Participate in physician-assisted suicide	15.6%
Participate in active euthanasia	9.8%

*There were 139 medical students and 78 residents in the group. Separate analysis of the data from these trainees yielded differences that were statistically insignificant (data compared to those of practicing physicians).

Table 3.—Survey Results of General Attitudes of 1,028 Hawaii Physicians

Approve of physician-assited suicide under some circumstances	60.0%
Would personally perform physician-assisted suicide	28.8%
Approve of active euthanasia under some circumstances	58.4%
Would personally perform active euthanasia	27.6%

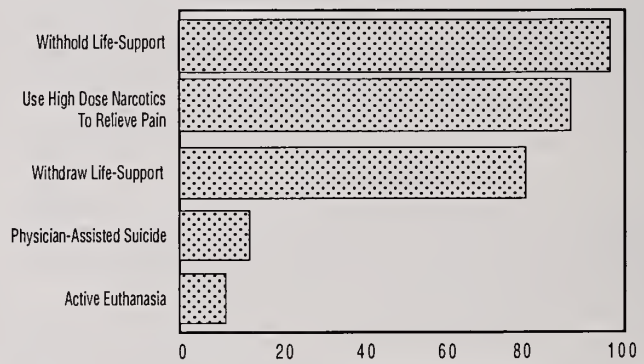
Note: 4% of respondents indicated they had personally assisted a patient to commit suicide; 3.5% said they had personally performed active euthanasia.

Table 4.—Ethnic and Religious Differences in Physician Response

	All Doctors (n=1,028)	**Filipino** (n=41)	**Haw/Poly** (n=35)	**Catholic** (n=195)
	Hypothetical Scenarios in a Terminally-ill Patient			
Would favor:				
Physician-assisted suicide	160 (15.6%)	2 (4.9%)+	1 (2.9%)***	13(6.7%)*
Active euthanasia	101 (9.8%)	2 (4.9%)+	2 (5.7%)	11 (5.6%)**
	General Attitudes			
Physician-assisted suicide:				
Would Approve	617 (60%)	13 (31.7%)**	14 (40%)***	83 (42.6%)*
Would Perform	296 (28.8%)	5 (12.2%)**	5 (14.3%)+	27 (13.8%)*
Active euthanasia:				
Would Approve	600 (58.4%)	11 (26.8%)*	14 (40%)***	78 (40.0%)*
Would Perform	284 (27.6%)	7 (17.1%)	8 (22.9)	33 (16.9%)**

(*) denotes p <0.001; (**) p<0.01; (***) p<0.05; (+) p<0.1>0.05. No statistical significance was found for other ethnic or religious categones

Fig 1.— Medical Decisions in a Hypthetical Terminal Patient



Lives in the Balance '96
A Letter to Members of Hemlock - Hawaii

Mikki Lawson

Aloha Dearest Hemlock Member,

First, as a fellow member of our Hemlock Society ohana here in Hawaii, I write to you with an update on some of the most recent developments within the US Court system regarding important *Right to Die* issues that are presently before the Courts.

Second, as an individual with an untreatable and 'terminal' neuromuscular illness—*commonly known as Lou Gehrig's Disease*—I'd like to personally encourage you to support our efforts across the Hawaiian Islands to create a heightened level of public awareness for the desperate plight of the terminally ill in gaining our freedom and civil rights.

Today, this struggle has now escalated into a war within the US legal system for our Constitutionally guaranteed rights to *Die with Dignity*, rights that have currently been abridged by *US Supreme Court Justice Sandra O'Connor's* injunction order of May 29th.

Background

March 6th, San Francisco, *US 9th Circuit Court of Appeals* — following years of contested legal wrangling throughout the courts of Washington and Oregon states, the 9th Circuit Court upheld the Constitutional Rights of the terminally ill, and ruled in favor of physician-assisted life termination for mentally competent, terminally ill persons. This ruling frees medical practitioners to legally prescribe and administer lethal drugs to terminal patients.

March 14th, New York, *US 2nd Circuit Court of Appeals*— following years of contested wrangling throughout the courts of New York and Vermont states, the 2nd Circuit Court upheld the Constitutional Rights of the terminally ill and ruled in favor of physician assisted life termination for mentally competent, terminally ill persons.

May 29th, Washington DC, *US Supreme Court*—The Hon. Justice Sandra Day O'Connor, the Supreme Court judge immediately responsible for the 9th Circuit issued a *stay* against the Circuit Court's rulings until she and her fellow Supremo's decide whether or not they might care to spare the time to *review* the 2nd and 9th decision. This *review* process will drag on into 1997 and possibly into the next century!

Meanwhile, the urgent and pain-filled agonized cries from hundreds of thousands of Americans who are forced to suffer the daily torture of terminal illness . . . goes totally unheeded by a legal/medical establishment more concerned with bureaucratic paper-shuffling and maintaining its power over the mass of society than clearly showing moral leadership or human compassion.

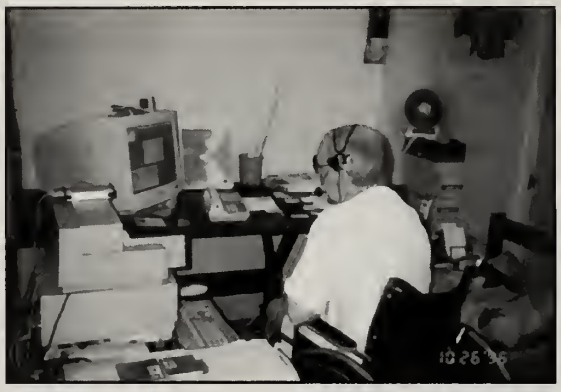
Lives in the Balance '96 —I appeal to you, the members of my Hemlock ohana, to please contact your elected representatives both here in Hawaii *and* in Washington DC, together with all nine Supreme Court Justices, and beseech those in power to regard the *review* of the 2nd & 9th Court rulings to decriminalize physician-assisted euthanasia by order of the nation's highest legal body. . . *as an extremely urgent matter.* Mahalo a Nui. A hui hou, malama pono. Mikki Lawson, Hemlock Hawaii Member (July 15, 1996)

Editor's Note:
I met Mikki Lawson via the e-mail and the Hemlock Society. After his "Lives in the Balance '96," he then published his "Mikki's Miracle Missive," part of which is reproduced below.

Mikki's Miracle Missive on the World Wide Web (Mikki's Mini Bio)

Aloha, My name is M.J. 'Mikki' Lawson; at last count I was 46 years young. Before my illness, I worked as a graphic artist/designer and advertising art director, and I'm a 1970 graduate of Camberwell School of Art, London, England.

As an experienced design and communication arts professional, I possess over twenty years of advertising, publishing and pre-press experience. I've been fortunate to have worked, worldwide, on many major international accounts - *Aloha Airlines; ARCO; Bayer Chemicals; California Federal Savings; Capital Investment; Chanel; Clairol; Great Western Savings; Hilton Hotels International; Hughes Aircraft; Knapp Publications; Litton Industries; Lloyds Bank; Lockheed Avionics; Midland Bank; Mortenson Construction; Northrop Corp.; Pacific Resources Inc.; ITT Sheraton Hotels, Hawaii; Teledyne; and United California Bank* . . . to name only a few.



Author, Mikki Lawson, who has amyotrophic lateral sclerosis ("Lou Gehrig's Disease") motor neuron disease, working at his computer station using DragonDictate, a voice—activated computer program. Courtesy: The Byting Edge, Honolulu.

I'm ex-Anglo, now a US-citizen living in Honolulu, Hawaii/USA since 1972, where I currently live together with a member of my support group who is also my caregiver, and who was born in the same year, same month, and has the same last name as mine. Her name is Erin Lawson and she's from Baltimore, MD . . . and she's too, a wounded individual only with spinal cord injuries . . . but together, we help each other.

I was diagnosed with ALS/MND (Amyotrophic Lateral Sclerosis/Motor Neuron Disease) in May of 1985 at the age of 34. At that time, my physicians rendered the reasonably standard prognosis—along

with the, also standard, set of medical disclaimers—of between 3-5 years of degenerative life expectancy.

Today, almost eleven years later, apart from two brief periods of catastrophic muscular weakness and temporary confinement to a wheelchair for a few months . . . I have been able to overcome most of the challenges and have managed to regain some strength . . . but since July of '95 I've been mostly disabled and dependent. However, I remain confident at overcoming this neuromuscular killer and leading as near a "normal" life soon.

Like most people, I've made some serious mistakes in my life. However, I consider myself as relatively 'normal' and, because of my recent brushes with terminal neuromuscular illness, I know how important it is to enjoy whatever time is available.

Current Objectives: Since July of 1995, I've been severely disabled. During this time of declining health, I've been given the unique opportunity to reflect for long periods of time in a wheelchair and in *solitary confinement* on the Quality of my life . . . past, present and, perhaps, future?

I'm acutely aware of the grim and terminal prognosis for most ALS/MND victims. However, I do believe in miracles and the healing power of love to conquer all. It is my fervent wish to be happy until the end . . . and to die happily.

Activist: *Director*, Hawaii Macintosh & Apple Users' Society; *Member*, Hemlock Society; *Member*, ALS Association; *Member*, Hawaii Gay/Lesbian Coalition; *Member*, Hawaii Transgender Outreach Support; Member, MDA; *Supporter*, ERGO. *Sysop:* Surfboard BBS.

I'm active in ALS support and research activities as well as being and active and vocal proponent for the 'right-to-die' movement. I'm interested in any and all info/help on ALS/NMD that's out there. Still learning.

As yet, I can still use my PowerPC pretty good to do DTP and Pre-Press work and some WWW pages. I like to feel I can still make a positive contribution... I'd welcome any ideas, thoughts, advice, direction or morale support anyone can offer.

You can reach me directly at osiris@tapa.com or 808-922-1801. My personal struggles can be accessed at http://www.tapa.com/ohana/MMM/purgatory.html

Aloha a Nui, a hui hou, malama pono, Mikki

Editor's Note:

(Part II) — I then met Mikki in person at a Board meeting of Hemlock Hawaii. Mikki doesn't get out very much now, but the *Handi-Van* did bring him to the meeting at Straub. This man has an unbelievable amount of courage and drive — to keep busy and make the best of life — and he does keep busy at his computer using a mouth-held probe. Hopefully, a new voice-activated computer, "Dragon Dictate" will enable him to be even more productive and faster using voice commands. On September 27, 1996, I received the most exciting message ever transmitted via E-mail: Subj: Where's My Red Shoes?

"I did it!!!... For the first time in 15 months of being confined to a wheelchair ... I walked over a dozen paces without ANY assistance and without pain this morning... Well, so much for incurable 'terminal' neuromuscular illness.....and...moving right along...we'll be back after this.....never discount the existence of miracles or underestimate the healing power of prayer... Oh Toto! Are we in Kansas yet?"



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Primary Care Update
Highlights of the HMA Scientific Session

Elizabeth Adams MD, HMJ Reporter

The Friday and Saturday morning programs October 18-19, 1996, were designed to bring primary care physicians up-to-date on a variety of specialties, emphasizing how to evaluate and treat and when to refer. Six speakers each morning delivered information-packed 30 minute talks. The program was truly excellent, and I hope that the speakers will comply with the Journal editor's request for manuscripts so that physicians who did not attend may have the benefit of their expertise. It is not possible to report it all in the limited space available here.

Dr Melvin H.C. Yee spoke about "worrisome" and "non-worrisome" headaches. Worrisome headaches are new onset headaches, those described as "the worst headache of my life" and those accompanied by focal neurological signs, meningeal signs, increased intracranial pressure, or a history of trauma or AIDS. Non-worrisome headaches are the benign recurrent headaches such as tension headache, classic migraine, common migraine, cluster headache, caffeine withdrawal headache and analgesic dependent headache. He discussed causes and treatment of each.

Dr Rhoads Stevens discussed common eye problems, beginning with a list of those which should be referred to an ophthalmologist: sudden loss of vision, eye pain not due to corneal abrasion, corneal opacity, pupillary abnormality, significant trauma, rapidly worsening acute conjunctivitis, chronic conjunctivitis lasting over one month; soft contact lens wearers because they are prone to pseudomonas infection which can lead to perforation in 24 hours; anyone with a history of previous eye surgery. Conditions which the primary care physician can treat: subconjunctival hemorrhage, chalazion, seborrheic blepharitis, acute adenoviral conjunctivitis, acute bacterial conjunctivitis, acute allergic conjunctivitis, corneal abrasion.

Dr Alfred J. Liu described approaches to allergic and non-allergic rhinitis, acute and chronic sinusitis, and workup of the patient with vertigo.

Dr John McDonnell described asthma as characterized by reversible airway obstruction, airway inflammation, and increased airway responsiveness to inhaled allergens and a variety of other stimuli. 75-85% of patients have positive skin tests. Airway inflammation is a major problem. Inhaled steroids are used to prevent symptoms, not to treat them, in patients with persistent asthma. Bronchodilators and beta-agonists are used to treat symptoms.

Dr Edward Chesne discussed the evaluation and treatment of the patient with hypertension. Many who have hypertension are unaware and many who are being treated are not adequately controlled. People with high normal BP (systolic 130-139, diastolic 85-89) are at increased risk for developing hypertension. Other coronary risk factors are common in those with hypertension, and treatment should begin with lifestyle modification. If response in 3-6 months is inadequate, drug treatment with diuretics or beta-blockers should be started. If BP control is still inadequate, dose should be increased or another drug substituted. If these fails the addition of a third drug may be indicated. If hypertension is severe (systolic 210, diastolic 120) prompt and aggressive treatment is necessary.

Dr Mari Nakashizuka described the evaluation of breast masses and abnormal mammograms. 80% masses are benign. Fine needle aspiration is used to distinguish cyst from solid mass. If the mass is not cystic, material should be withdrawn for cytology. Surgical consult should be sought if there is a residual mass after a cyst is evacuated or if the fluid is bloody. 80% with breast cancer have no known risk factors; 1:1000 men have breast cancer.

Dr Erlaine Bello's topic was the choice of antibiotics for respiratory tract infections in outpatients. Otitis media is the most common infection for which antibiotics are used. Most common agents in otitis media and bacterial sinusitis are pneumococcus and H. influenza. Strep pyogenes and rhinovirus are most often implicated in pharyngitis. Penicillin VK is the cheapest for strep pharyngitis. Amoxicillin is effective against hemophilus as well as the gram-positive organisms. Third generation cephalosporins are the best gram-negative agents and have the longest dosing intervals. Erythromycin is inexpensive but has to be given QID. Compliance depends upon dosing frequency, length of treatment and side effects.

Dr Norman Goldstein provided guidelines for the treatment and referral of common skin problems: acne should be referred if response to 6-8 weeks of treatment with OTC preparations such as desquamex is poor; psoriasis if inadequate response with 3-4 weeks of topical steroids or tar preparations; warts and molluscum contagiosum if the physician does not have the facilities or training for treatment; moles and keratoses should be referred if malignancy is suspected, if there is a personal or family history of melanoma, or if the lesion grows, changes color or shape, bleeds, ulcerates or is subject to irritation; herpes simplex and zoster if there is no response to treatment in 5-7 days; impetigo and pyoderma if unresponsive to antibiotics after 2-3 days; fungal infections if they do not respond to topical antifungals; alopecia if the cause is not obvious or if the physician lacks experience for managing.

Dr James Scoggins discussed the diagnosis and treatment of common athletic injuries: dislocations and subluxations of the shoulder, rotator cuff strain or tear, acromioclavicular joint separation, lateral epicondylitis (golfer's wrist), skier's or gameskeeper's thumb, ulnar nerve compression (distance cyclists), extensor synovitis of radial wrist extensors (oarman's wrist), trochanteric bursitis (female runners usually), hamstring pain (football and soccer), chondromalacia patella (runner's knee), iliotibial band friction syndrome (runners and cyclists), shin splints (runners), ankle sprains.

Dr William Yarbrough discussed the evaluation and treatment of impotence. Causes include many drugs, a wide variety of diseases, surgical procedures and traumas. Treatment is based on determination of the underlying cause and its elimination if possible. Some oral and intercavernosal medications may be helpful. Prostheses are a last resort.

Dr William Haning, III, covered the outptient evaluation and management of substance abusers. He described screening instruments used to assess abusers of alcohol and other drugs and criteria for deciding whether outpatient treatment is appropriate.

Dr Gerald McKenna discussed sources of physicians' stress and the impact on physicians' families. Stresses may come from the training experience, the demands of practice, failure to forgive oneself for mistakes, and the physician's personality. Stress may result in physical illness, depression, anxiety, and chemical dependence. Families may experience alienation from the physician, feel abandoned and they often suffer in silence. Chemical abuse/dependence is common; divorce and separation rates are high. Possible solutions are physician support groups, physicians health committees, psychotherapy (usually rejected), medication, or mentoring to improve practice management.

The Sunday morning session dealt with managed care. Robert C. Nickel (HMSA) gave an overview of managed care in Hawaii. Dr John Berthiaume discussed how physicians are selected, deselected, evaluated and compensated in managed care programs. Dr George Bussey described the effects of managed care on doctor-patient relationships and the ethical dilemmas which may arise. Dr Michael Nagoshi discussed practice guidelines and problems which may be associated with their use. Finally attorney Peter C. P. Char talked about medical-legal aspects of managed care and the potential liability of physicians. He emphasized the importance of careful documentation of the decision-making process and of discussions with the patient regarding informed consent.

Scientific Manuscripts

We are always looking for interesting scientific articles and we would like to hear from more of you. The Hawaii Medical Journal is a peer reviewed publication and covers a wide variety of topics. To submit a manuscript please call us for manuscript guidelines. Fax or call for your requests to: Hawaii Medical Journal, 1360 S. Beretania Street, Honolulu, Hawaii 96814, Phone (808) 536-7702 or Fax us at (808) 528-2376.

Life and Death in Hawaii: Ethnic Variations in Life Expectancy and Mortality, 1980-1990

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Why I Do Not Believe in Mercy Killing
Continued From Page 273

This instrument, commonly used in conjunction with a living will, authorizes a designated trusted individual to decide on the patient's behalf, including the refusal of treatment. These are legitimate examples of patient autonomy at work. Allowing death to occur naturally by withholding ineffective and non-beneficial treatment is fundamentally different from the deliberate termination of life. In the former case, the underlying terminal condition is allowed to take its natural course; in the latter, a positive act is performed with the specific intent to kill.

Unfortunately, only a minority, perhaps 15% of the public, has executed such advanced directives. One reason — fear that they may be prematurely 'done-in' if they are hospitalized with living wills. Continued educational efforts should allay these fears; permitting mercy-killing, on the other hand, can be expected to have the opposite effect.

But most of all, legalizing mercy-killing will lead us down the slippery slope, with inevitable abuses. What begins as allowing free-choice would slide into subtle encouragement to end life; mental coercion and involuntary euthanasia without explicit patient requests lie short steps away. Relieving a burden and saving the healthcare dollar are the unspoken rationalizations. Who is most imperiled? — the handicapped, the poor and the aged. The right to die now becomes a duty to die.

Incidentally, the free-choice argument, extended to its logical conclusion, should not require the pre-requisite of a terminal illness. Or for that matter, any illness. Remember, whose life is it anyway?

History, religion and sociology are all on the side of banning mercy-killing. Since the dawn of history, society has always forbidden the taking of lives by physicians. The Hippocratic oath bears such testimony. All religions of the world consider mercy-killing to be sinful, immoral, or just plain wrong. And experiences from the Dutch, who have condoned the practice for some time, tell us that nearly 90% of patients rescinded their initial death request, most often after having had the opportunity to resolve feelings of depression, helplessness, and fear of abandonment. Most tellingly, in some 1,000 deaths, there was **no** explicit request by the patient for mercy-killing.

The views of advocates of "managed-death" are wrong because they cheapen human life, misconstrue and oversimplify the clinical context of the dying patient, and underestimate the fatal impact mercy-killing will wield on society's voiceless and vulnerable. I concede there may be an extreme case of intolerable unremitting pain in an absolutely clear-minded individual who pleads for a merciful end. How could one not feel compassion and empathy in such a rare example? I frankly do not know how I would react to such a request by my patient. But I do know this: America is currently squeezed by rising healthcare costs, and is experiencing mindless violence, increasing discrimination, family rupture, and the secularization of the medical profession into a business. In this environment, a thumbs-up for legalized mercy-killing will work to produce a more dangerous, impersonal and uncaring society.

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Volume 55, 1996

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AMA Board Chair discusses Physician-Assisted Suicide



Photo by: Ted Grudzinski

What is the AMA's overall position on the issue of physician-assisted suicide?

Physicians are devoted to healing and to relieving suffering. As your doctor, I am obligated and committed to helping you in your remaining days. I cannot be the cause of your death, nor can I assist you in causing your own death.

What is the AMA's underlying concern on this issue?

The heart of our concern is placing physicians in the position to actively end their patients' lives. My patients must know wholeheartedly that I am devoted to their health and welfare, not deciding their fate based on what I, or others, might perceive to be the value of their remaining life. Make no mistake, when it comes to caring for my patients' health and welfare, I am their trusted ally.

Does the AMA's Code of Medical Ethics represent all physicians?

Like all individuals, physicians do have a range of personal opinions on various issues. However, the Code of Medical Ethics, which is maintained by the AMA's Council on Ethical and Judicial Affairs, is widely followed throughout the country. It is cited regularly by State Medical Boards when determining standards of practice for the medical profession. In addition, the AMA's House of Delegates reviews and approves all ethical opinions contained in the Code of Medical Ethics. Because the House of Delegates represents, in one way or another, nearly 98 percent of the physicians in America, the Code of Medical Ethics is truly representative of medicine's position with regard to ethical opinions.

How do you respond to critics who say the AMA's position on physician-assisted suicide does not consider patient fear and desire for dignity at the end of life?

Fear associated with physical suffering, with losing control, with being a burden to or dependent upon family members, and with losing dignity is an understandable reality. The medical profession has not concentrated on these issues to the necessary degree. But, we feel the appropriate alternative to physician assisted suicide is improved care through a better informed medical profession and public, working together to ease the dying process. I will use all of my skill and knowledge to relieve your suffering, I will get you the help you need to come to terms with death. But, I cannot help you kill yourself.

How does the AMA distinguish between controlling pain even if it causes death and assisted suicide?

The distinction is based on the intent of my actions. I am acting in the best interests of my patient if, while attempting to control suffering and maximize his or her comfort, death is hastened. However, if the intent of my actions goes beyond comfort and focuses specifically on causing death, I am either assisting in suicide or performing euthanasia, both of which are unethical.

How does assisted suicide through pain medication differ from death caused by removal of treatment/ life support? In the case of a patient whose life is artificially extended by technology, they and their family, in consultation with their physician, may decide to withdraw that life support. The patient's ability to remove the technological barriers to natural death is paramount to their autonomy and dignity. Again, the issue is one of intent. By removing artificial life support, I am honoring my patient's wish to allow natural death to occur. My intent is to avoid prolonging artificially sustained life, not to cause death.

Will the AMA appeal these and other Court decisions?

We will do whatever is necessary to ensure that physicians are not put in a position to kill, and that patients die in comfort and with dignity. If this means appealing directly or submitting amicus briefs or offering verbal or written testimony in support of an appeal, we will do so. In addition, the AMA is mounting a major information based campaign to educate and inform the courts, the media, physicians and the general public about the alternatives to physician-assisted suicide, including hospice care.

Will the AMA consider changing its policy regarding physician-assisted suicide?

We will continue our discussions with those whose opinions differ from ours. We will aggressively increase our efforts to educate physicians at all levels in treating physical pain and the psychological needs of patients at the end of life. We will work diligently to enlighten patients on the alternatives to physician assisted suicide, including hospice care. However, the related ethical opinions developed by the AMA's Council on Ethical and Judicial Affairs will remain unchanged.

Interview by Mark Wolfe

The Weathervane

Russell T. Stodd MD

Only in America.

This corny story is about oily Stefano Mazzola, CEO of TriCon Associates of Hasbrouck Heights, N.J. who was arrested on racketeering charges. Allegedly, Mazzola, a reputed mafia enforcer and other members of the Genovese crime family, were paying unnamed individuals $100 for each new member signed to the HMO or PPO clients of Tri-Con. As a side action, by using his brokerage contacts, he was able to provide free medical coverage for mobster associates. What a guy; a fraudulent medical enrollment plan, free heath care for the Don and family, plus a lottery, bookmaking, and sports betting on the side.

There Ought to be a Law- and Now There is!

In a truly landmark legal decision, a state court in Idaho ruled that laser surgery is actually surgery. The outcome of this action is that wannabe eye surgeon optometrists will not be able to perform photorefractive keratectomy (PRK) just like real doctors do. Additionally, the court stated that the Idaho State Board of Optometry does not have the power to enlarge the scope of the practice of optometry. The logic of this patient protection decision will not be limited to eye surgery, but should establish a precedent for all areas of medical practice where pretenders could invade with lasers. If the wannabes had been supported by the court, we would soon see beauticians performing laser blepharoplasties, and naturopaths and chiropractors doing laser removal of vericose veins and treating skin disorders.

There is no Underestimating the Intelligence of the American Public.

Apparently the reason Joe Camel is wearing dark glasses is because the poor old dromedary is blind. The discovery that the use of tobacco increases the incidence and severity of age-related macular degeneration was big news for the media. Reporting in the October 9, 1996, *JAMA,* Seddon, et.al. at the Mass. Eye and Ear Infirmary, in an epidemiologic study, found that women smokers had an AMD occurrence roughly 2.4 times that of women who never smoked. The data were slightly less provocative for males.

Showing up is 80% of Life.

The recent Hawaii Medical Association annual meeting at the Kauai Marriott was a very productive gathering of the members, visiting MDs, Delegates to the House, and spouses. If you failed to attend, you missed a fascinating and inexpensive, highly relevant educational and social event. Also, the HMA is in the process of restructuring in order to provide a leaner and more relevant organization to tighten expenditures, and provide more action. An interesting and frightening sidelight was the allegation that a physician assistant (PA) on Kauai is openly practicing medicine by using an electronic communication with a distant physician for his umbrella. Delegates were alarmed to learn that an unscrupulous doctor can lend his license to PAs, apparently without regulation, while he claims to be supervising the PA through electronics. This disgraceful medical license abuse must be investigated and prosecuted by RICO and the Board of Medical Examiners. This is still another example of incompetent pretenders not bothering with the challenging experience of earning a medical education.

Information Deteriorates Upward Through Bureaucracies.

If you didn't already know, the Corporation for Enterprise Development in Washington D.C. surveyed the fifty states for business employment, earnings, job quality and economic performances, and Hawaii finished—dead last. That's right, number five-oh, and that's not a TV show. Keep that in mind when you head for the polls, and remember also that small business employs 54% of the private work force, contributes 52% of all US sales, and was responsible for 50% of the private GNP.

Everyone is, in his Own Way, Vulnerable.

A family physician in Arkansas examined a 13 month old infant and found a forearm fracture of both bones and bruises on the baby's head. Suspecting child abuse, the doctor inquired if anyone deliberately injured the baby. The mother said no one was abusing the child, and the doctor dropped the issue and did not report her suspicions to the state Human Services Department. Three months later, the 16 month old girl was brought to a Lime Rock hospital and was pronounced dead of massive head injuries. The mother's boyfriend was arrested and convicted of first degree murder and sentenced to life in prison. Subsequently, in a civil suit, a jury dctermined that the doctor had committed malpractice for failure to pursue the original suspicions, and awarded $200,000 to the baby's estate. ,

We Must Live with the Ambiguity of Partial Knowledge.

In the spring of the year, a patient was experiencing dizzy spells and difficulty closing her right eye. In November, she consulted a neurologist who diagnosed Bell's palsy. Because the condition was still present three months later, he admitted her to the hospital for diagnostic tests which revealed no abnormality. The patient did not return until the following year, at which time the doctor modified his diagnosis by saying the condition was "a bit more routine than Bell's palsy," but he ordered no further tests. The patient did not return to his care, but 18 months later underwent surgery to remove a tumor from her facial nerve. Because the nerve was destroyed, the patient brought a successful lawsuit against the neurologist claiming that his delay prevented any possibility of saving nerve function. The jury awarded her $800,000.

Addenda—

- Percentage of Americans who didn't know Serbs were the groups that attacked Bosnia: 79%; who didn't know the reason for the fighting: 68%; who didn't know the meaning of ethnic cleansing: 66%.
- People who read the Packwood dairies can't wait to get to the bottom of the page, which incidentally is Packwood's problem too.

Aloha and keep the faith—rts ■

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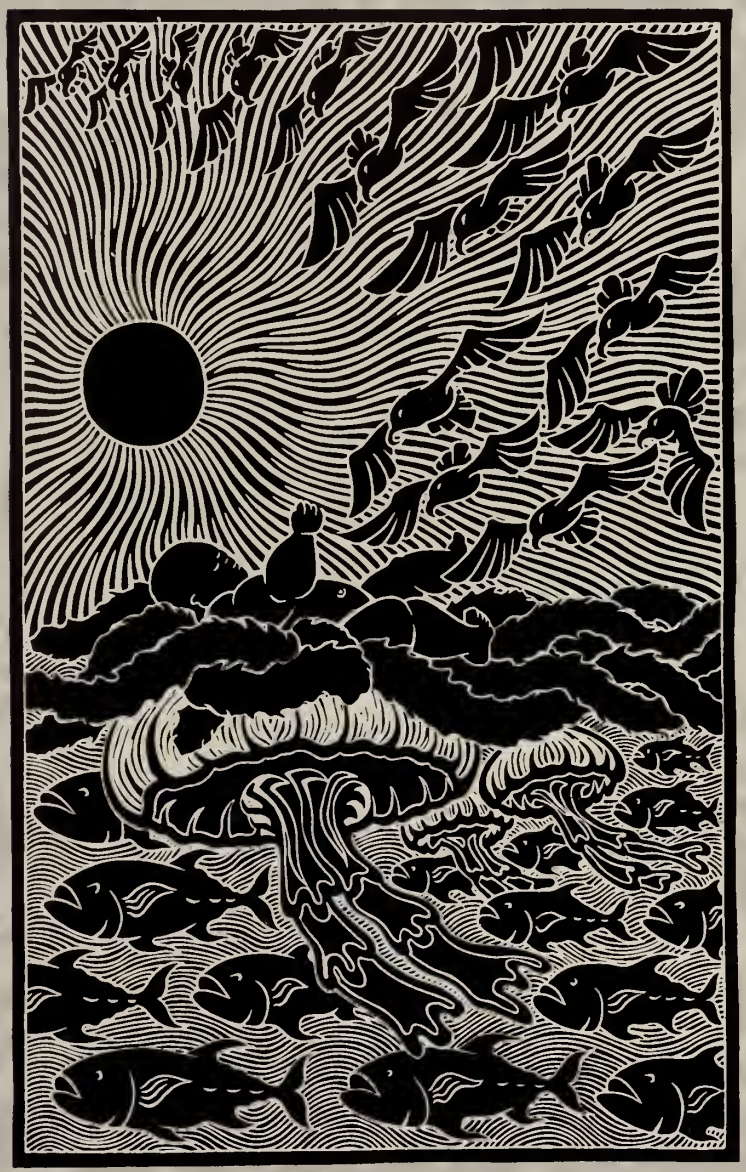
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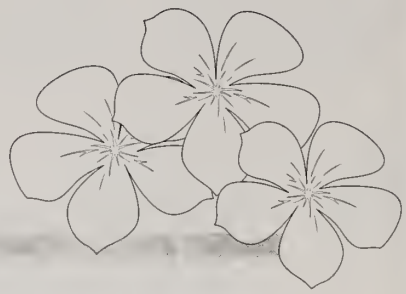
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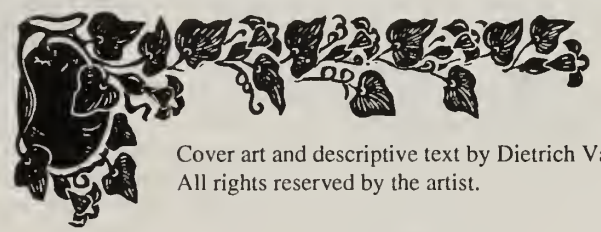
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Keiki Maui

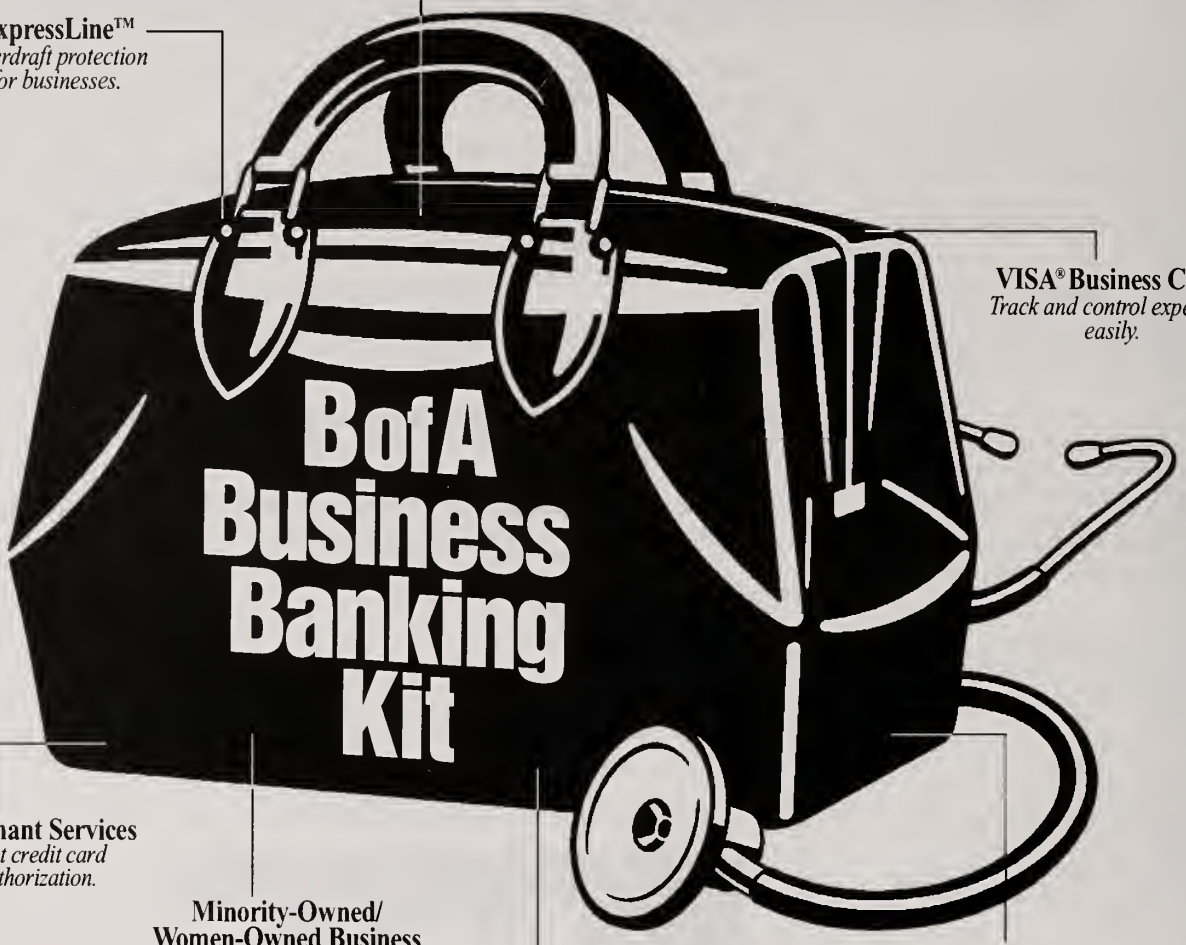
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Editorial

Norman Goldstein MD

Panel will Study the Right to Doctor-Assisted Aid-in-Dying

Governor Ben Cayetano has appointed a Blue-Ribbon Panel to study the controversial issue of death with dignity, or the right of a mentally competent, terminally-ill adult patient to request physician-assisted aid-in-dying.[1]

Last month's Special Issue on Death with Dignity will undoubtedly play a key role in the deliberations of this Blue Ribbon Panel. One of the panel members suggested to me that it might be called a "black ribbon panel." Blue or black, it is a very, very important panel, a panel that will make recommendations to the Governor and the State Legislators pertaining to this—the most critical medical/legal issue of the decade in Hawaii and the nation.

The panel members are **Dr Naleen N. Andrade**, psychiatrist; **Dr Max Botticelli**, retired University of Hawaii School of Medicine professor; **Dr Norman Goldstein**; editor of the Hawaii Medical Association Journal; **Dr Brian Issell**, director of UH's Cancer Center of Hawaii; **Dr Larry Miike**, director of the state Department of Health; **A.A. "Bud" Smyser**, contributing editor of the Honolulu Star-Bulletin; **Betty Vitousek**, retired Circuit Court judge; **Mary Cooke**, senior citizen; **Jeffrey P. Crabtree** and **James Pietsch**, attorneys; **Lawrence Heintz**, UH-Hilo professor of humanities; **Hideto Kato**, former director of the state Department of Business, Economic Development and Tourism; **Rev. Beth Donaldson**, Kapaa United Church of Christ; **Sister Roselani Enomoto**, director of the Catholic social ministry office on Maui; and **Rev. Yoshiaki Fujitani**, retired bishop of Honpa Hongwanji Temple.

There are two sides to every discussion. The **Hawaii Medical Library** and **Ann Catts, MD**, retired pathologist, presented an exhibit on "Death with Dignity—Pro and Con." While the American Medical Association has "officially" opposed physician-assisted aid-in-dying at this time, many of its members, and most of the physicians who are not members of the AMA, are in favor of assisted aid-in-dying and some have actually assisted their patients with their final wishes.

This is just the beginning of a long debate about this critical problem. I suggest that you write to the Governor; your state legislators; and send a "letter to the editor" with your comments and concerns. Space permitting, we will try to publish these letters.

References

1. Ohira, Rod. Honolulu Star-Bulletin, November 8, 1996, p. A-6

Hawaii Medical Journal

Extra copies of the *Hawaii Medical Journal* September Special issue on Domestic Violence and the December Special issue on Death and Dying are available. For more information please contact the Hawaii Medical Association at (808) 536-7702, or Fax us at (808) 528-2376.

Letters to the Editor

I am working on a book on medical ethics and would like to enlist the help of other physicians to answer this question: ***Have you ever faced an ethical dilemma, and if so, how did you resolve it?***

I am interested in all aspects of medical ethics—human experimentation, ethics of reproductive technology, abortion, medical treatment of the uninsured and poor, malpractice, physician assisted suicide, the right-to-die (why some doctors do not honor Living Wills), genetic counseling, genetic manipulation, euthanasia, kidney, lung and heart transplant, use of fetal tissue, or any other situation concerning an ethical dilemma.

Claude A. Frazier, MD

Please reply to:
Claude A. Frazier, MD
4C Doctors Park
Asheville, NC 28801

President's Message

John S. Spangler MD

The Hawaii State Legislature will open on the third Wednesday of January, and will be in session for 60 working days. Dr Leonard Howard will again serve as legislative analyst for the HMA and HMA Staff members Lisa Tong and Becky Kendro will monitor all health related legislation.

HMA will host a reception for legislators at the HMA Office on Monday, February 3. All HMA members and spouses are invited to attend, however reservations are required.

I also wanted you to know that the HMA Reorganization Task Force, chaired by Paul DeMare, MD and co-chaired by Patricia Chinn, MD is meeting regularly Meetings are open to all members and are scheduled for January 6, 13, and 27 at 5:30 p.m. Please let the HMA operator know if you plan to attend. The Task Force report will be presented to a special House of Delegates session which is scheduled for Saturday, April 5 in the HMA Conference Room. Information will be circulated prior to the meeting.

The next year will bring many changes for us as we approach the legislative process. Please help us by joining the legislative committee!

You do make a difference but we need your help! Call the HMA office at 536-7702 to get into the middle of this process.

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Medical School Hotline

The Role of International Medicine in Medical Education

Edward J. Morgan, MD
Associate Professor of Medicine and
Division Chief of International Medicine
John A. Burns School of Medicine

The world is rapidly becoming smaller. For many of us vast portions of the world were in "black boxes," but are now open books. Russia and China are just two examples.

The economy of the United States and Hawaii is currently slow. On the other hand, countries such as Thailand and Vietnam have economies that are so vibrant, a drive from their airport to their downtown cities paints a panorama that is totally different than several years ago.

Medicine worldwide is also dramatically changing. Transplantation of organs is an important topic in Hawaii with lung transplantation being seriously considered. In the People's Republic of China, however, the transplantation of organs is a regular operation. Numerous organs including the pancreas are routinely transplanted.

Trauma in the United States and also in Hawaii is an important aspect of medical care. However, in "rural" hospitals of Thailand, where automobile accidents are common, the attachment of limbs and neurosurgical procedures on accident victims is an occurrence far more common than in the United States/Hawaii.

It is evident from the above that International Medical Education must be an aspect in the education of all medical students and medical housestaff. To not provide International Medical Education would be to short-change the future of our medical society.

Medical Education is best made "hands-on." This means that International Medical Education is best made through an exchange program with students and residents from the University of Hawaii School of Medicine spending one to six months in a foreign country and physicians from those countries spending an equivalent stay at the University of Hawaii School of Medicine.

Such exchange programs have been developed and are highly active. Exchange programs have been developed in Thailand, the People's Republic of China, Hong Kong, and Japan. Such exchange programs are formalized, ongoing, and mutually beneficial.

For example, negotiations have just concluded for a fourth-year medical student/first-year medical resident to receive a scholarship to spend three to six months in the People's Republic of China. In return for a full scholarship, the recipient agrees to stay at the University of Hawaii School of Medicine for three-years of Internal Medicine Training. The experiences such an individual learns in China will be of interest to colleagues, and a delightful interchange of culture is anticipated. The People's Republic of China sent a delegation to Hawaii in the Fall of 1996.

Although didactic programs are of some benefit, they are often too "generic" and have limited educational impact. As a result, where didactic sessions are given, they are given by individuals who have actively participated in the health care system in foreign countries. For example, medical students and residents have recently given lectures at the University of Hawaii School of Medicine on topics such as Disseminated Strongyloides, Rotator Cuff Injuries in Sumo Wrestlers, Malarial Prophylaxis, and Gastroenteritis. For the latter two topics, the presenters themselves had actively experienced the frustrations of the side effects of medications and the results of significant dehydration. Such lectures have a much greater impact.

The University of Hawaii School of Medicine will continue to develop such exchange programs. If any individual is interested in any aspect of these programs, they are invited to contact the Chairman of the International Affairs Committee, Satoru Izutsu, PhD (ph: 956-5505) or Edward Morgan, MD (ph: 521-8305).

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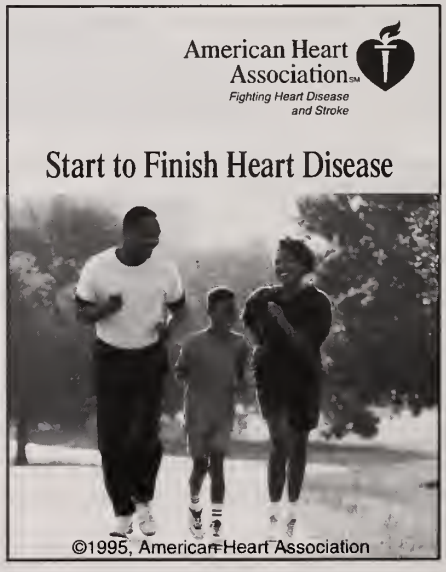
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Microsporum gypseum
Microsporum nanum
Trichophyton verrucosum
Candida albicans
Scopulariopsis brevicaulis

CLINICAL STUDIES

The efficacy of Lamisil® (terbinafine hydrochloride tablets) Tablets in the treatment of onychomycosis is illustrated by the response of patients with toenail and/or fingernail infections who participated in two US/Canadian placebo-controlled clinical trials.

Results of the toenail study, as assessed at week 48 (12 weeks of treatment with 36 weeks follow-up after completion of therapy), demonstrated mycological cure, defined as simultaneous occurrence of negative KOH plus negative culture, in 70% of patients. Fifty-nine percent (59%) of patients experienced effective treatment (mycological cure plus 0% nail involvement or >5mm of new unaffected nail growth); 38% of patients demonstrated mycological cure plus clinical cure (0% nail involvement).

Results of the fingernail study, as assessed at week 24 (6 weeks of treatment with 18 weeks follow-up after completion of therapy), demonstrated mycological cure in 79% of patients, effective treatment in 75% of the patients, and mycological cure plus clinical cure in 59% of the patients.

The mean time to overall success was approximately 10 months for the toenail study and 4 months for the fingernail study. In the toenail study, for patients evaluated at least six months after achieving clinical cure and at least one year after completing Lamisil® therapy, the clinical relapse rate was approximately 15%.

INDICATIONS AND USAGE

Lamisil® (terbinafine hydrochloride tablets) Tablets are indicated for the treatment of onychomycosis of the toenail or fingernail due to dermatophytes (tinea unguium) *(see DOSAGE AND ADMINISTRATION).*

CONTRAINDICATIONS

Lamisil® (terbinafine hydrochloride tablets) Tablets are contraindicated in individuals with hypersensitivity to terbinafine.

WARNINGS

Rare cases of symptomatic hepatobiliary dysfunction including cholestatic hepatitis have been reported. Treatment with Lamisil® (terbinafine hydrochloride tablets) Tablets should be discontinued if hepatobiliary dysfunction develops *(see PRECAUTIONS).* There have been isolated reports of serious skin reactions (e.g., Stevens-Johnson Syndrome and toxic epidermal necrolysis). If progressive skin rash occurs, treatment with Lamisil® should be discontinued.

PRECAUTIONS

General: Changes in the ocular lens and retina have been reported following the use of Lamisil® (terbinafine hydrochloride tablets) Tablets in controlled trials. The clinical significance of these changes is unknown. Hepatic function (hepatic enzyme) tests are recommended in patients administered Lamisil® for more than six weeks *(see WARNINGS).*

In patients with either pre-existing liver disease or renal impairment (creatinine clearance ≤50 mL/min), the use of Lamisil® has not been adequately studied, and therefore, is not recommended *(see CLINICAL PHARMACOLOGY, Pharmacokinetics).*

Transient decreases in absolute lymphocyte counts (ALC) have been observed in controlled clinical trials. In placebo-controlled trials, 8/465 Lamisil®-treated patients (1.7%) and 3/137 placebo-treated patients (2.2%) had decreases in ALC to below 1000/mm³ on two or more occasions. The clinical significance of this observation is unknown. However, in patients with known or suspected immunodeficiency, physicians should consider monitoring complete blood counts in individuals using Lamisil® therapy for greater than six weeks.

Isolated cases of severe neutropenia have been reported. These were reversible upon discontinuation of Lamisil®, with or without supportive therapy. If clinical signs and symptoms suggestive of secondary infection occur, a complete blood count should be obtained. If the neutrophil count is ≤1,000 cells/mm³, Lamisil® should be discontinued and supportive management started.

Drug Interactions: *In vitro* studies with human liver microsomes showed that terbinafine does not inhibit the metabolism of tolbutamide, ethinylestradiol, ethoxycoumarin, and cyclosporine. *In vivo* drug-drug interaction studies conducted in normal volunteer subjects showed that terbinafine does not affect the clearance of antipyrine, digoxin, and the antihistamine terfenadine. Terbinafine does not affect the clearance of warfarin or warfarin's effect on prothrombin time. Terbinafine decreases the clearance of intravenously administered caffeine by 19%. Terbinafine increases the clearance of cyclosporine by 15%.

Terbinafine clearance is increased 100% by rifampin, a CyP450 enzyme inducer, and decreased 33% by cimetidine, a CyP450 enzyme inhibitor. Terbinafine clearance is decreased 16% by terfenadine. Terbinafine clearance is unaffected by cyclosporine.

There is no information available from prospectively conducted drug interaction studies with the following classes of drugs: oral contraceptives, hormone replacement therapies, hypoglycemics, theophyllines, phenytoins, thiazide diuretics, beta blockers, and calcium channel blockers.

Carcinogenesis, Mutagenesis, Impairment of Fertility: In a 28-month oral carcinogenicity study in rats, a marginal increase in the incidence of liver tumors was observed in males at the highest dose level, 69 mg/kg/day [13.8× the maximum recommended human dose (MRHD) based on body weight (BW) and 3.6× the MRHD based on body surface area (BSA)]. There was no dose-related trend and the mid-dose male rats (20 mg/kg/day; 4.0× the MRHD based on BW and 1.0× the MRHD based on BSA) did not have any tumors. No increased incidence in liver tumors was noted in female rats at dose levels up to 97 mg/kg/day (19.4× the MRHD based on BW and 4.5× the MRHD based on BSA) or in male or female mice treated orally for 23 months at doses up to 156 mg/kg/day (31.2× the MRHD based on BW and 3.9× the MRHD based on BSA).

A wide range of *in vivo* studies in mice, rats, dogs, and monkeys, and *in vitro* studies using rat, monkey, and human hepatocytes suggest that the development of liver tumors in the high-dose male rats may be associated with peroxisome proliferation, and support the conclusion that this is a rat-specific finding. *In vivo* investigations included evaluations of the effects of Lamisil® on liver weight, morphology, and ultrastructure; hepatic cytochrome P450; and peroxisome proliferation assessed morphologically and biochemically (peroxisomal enzymes) in mice, rats, dogs, and monkeys. The effects of Lamisil® and two known metabolites on hepatic morphology and peroxisomal and P450 enzyme activities were also evaluated *in vivo* in male rats and *in vitro* in primary hepatocyte cultures from male rats and humans and from monkeys. The results of the *in vivo* investigations indicated that oral administration of Lamisil® (500 mg/kg/day) resulted in peroxisome proliferation in rats, and that these effects did not occur in mice, dogs, or monkeys. Further, *in vitro* studies indicated that peroxisome proliferation occurred in rat hepatocytes, but not in monkey or human hepatocytes.

Systemic exposure to Lamisil®, assessed by the steady-state plasma unbound fraction area under the curve (AUC) for terbinafine and metabolites, was 7.7 and 9.7 µg·h/mL for male and female rats, respectively, and 11.2 and 13.1 µg·h/mL for male and female mice, respectively, at doses comparable to the high doses in the carcinogenicity studies. In human subjects at the MRHD (a daily dose of 250 mg of Lamisil®), the unbound AUC was 0.466 µg·h/mL. The resulting safety margins for humans, based on relative systemic exposure (AUC unbound), in rats and mice were 17 to 21 and 24 to 28, respectively.

The results of a variety of *in vitro* and *in vivo* genotoxicity tests gave no evidence of a mutagenic or clastogenic potential, and demonstrated the absence of tumor-initiating or cell-proliferating activity.

Oral reproduction studies in rats at doses up to 300 mg/kg/day (60× the MRHD based on BW and approximately 12× the MRHD based on BSA) did not reveal any specific effects on fertility or other reproductive parameters. Intravaginal application of terbinafine hydrochloride at 150 mg/day in pregnant rabbits did not increase the incidence of abortions or premature deliveries nor affect fetal parameters.

Pregnancy: *Pregnancy Category B*: Oral reproduction studies have been performed in rabbits and rats at doses up to 300 mg/kg/day (60× the MRHD based on BW and 9× to 12× the MRHD, in rabbits and rats, respectively, based on BSA) and have revealed no evidence of impaired fertility or harm to the fetus due to terbinafine. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, and because treatment of onychomycosis can be postponed until after pregnancy is completed, it is recommended that Lamisil® not be initiated during pregnancy.

Nursing Mothers: After oral administration, terbinafine is present in breast milk of nursing mothers. The ratio of terbinafine in milk to plasma is 7:1. Treatment with Lamisil® is not recommended in nursing mothers.

Pediatric Use: The safety and efficacy of Lamisil® have not been established in pediatric patients.

ADVERSE REACTIONS

The most frequently reported adverse events observed in the 3 US/Canadian placebo-controlled trials are listed in the table below. The adverse events reported encompass gastrointestinal symptoms (including diarrhea, dyspepsia and abdominal pain), liver test abnormalities, rashes, urticaria, pruritus, and taste disturbances. In general, the adverse events were mild, transient, and did not lead to discontinuation from study participation.

	Adverse Event		Discontinuation	
	Lamisil® (%) n=465	Placebo (%) n=137	Lamisil® (%) n=465	Placebo (%) n=137
Headache	12.9	9.5	0.2	0.0
Gastrointestinal Symptoms:				
Diarrhea	5.6	2.9	0.6	0.0
Dyspepsia	4.3	2.9	0.4	0.0
Abdominal Pain	2.4	1.5	0.4	0.0
Nausea	2.6	2.9	0.2	0.0
Flatulence	2.2	2.2	0.0	0.0
Dermatological Symptoms:				
Rash	5.6	2.2	0.9	0.7
Pruritus	2.8	1.5	0.2	0.0
Urticaria	1.1	0.0	0.0	0.0
Liver Enzyme Abnormalities*	3.3	1.4	0.2	0.0
Taste Disturbance	2.8	0.7	0.2	0.0
Visual Disturbance	1.1	1.5	0.9	0.0

* Liver enzyme abnormalities ≥2× the upper limit of the normal range.

Rare adverse events, based on worldwide experience with Lamisil® (terbinafine hydrochloride tablets) Tablets use, include: symptomatic idiosyncratic hepatobiliary dysfunction (including cholestatic hepatitis) *(see WARNINGS and PRECAUTIONS),* serious skin reactions *(see WARNINGS),* severe neutropenia *(see PRECAUTIONS),* and allergic reactions (including anaphylaxis). Rarely, Lamisil® may cause taste disturbance (including taste loss) which usually recovers within several weeks after discontinuation of the drug.

OVERDOSAGE

There is no information on human overdosage with Lamisil® (terbinafine hydrochloride tablets) Tablets. Single oral doses in rats and mice up to 400 times the therapeutic dose produce sedation, drowsiness, ataxia, dyspnea, exophthalmus, and piloerection; animal mortality was less than 50% at this dose level.

DOSAGE AND ADMINISTRATION

Lamisil® (terbinafine hydrochloride tablets) Tablets, one 250 mg tablet, should be taken once daily for 6 weeks by patients with fingernail onychomycosis. Lamisil®, one 250 mg tablet, should be taken once daily for 12 weeks by patients with toenail onychomycosis. The optimal clinical effect is seen some months after mycological cure and cessation of treatment. This is related to the period required for outgrowth of healthy nail.

HOW SUPPLIED

Lamisil® (terbinafine hydrochloride tablets)Tablets

Supplied as white to yellow-tinged white circular, bi-convex, bevelled tablets containing 250 mg of terbinafine imprinted with "LAMISIL" in circular form on one side and code "250" on the other.

Bottles of 100 tablets
NDC 0078-0179-05

Bottles of 30 tablets
NDC 0078-0179-15

Store tablets below 25°C (77°F); in a tight container. Protect from light.

Sandoz Pharmaceuticals Corporation, East Hanover, New Jersey 07936

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The Words of Hippocrates!

Arlene D. Meyers MD

Many years ago, at my graduation from medical school in South Africa, I spoke these profound words of Hippocrates:

> —"I do solemnly declare":
> "That I will exercise my profession to the best of my knowledge and ability for the safety and welfare of all persons entrusted to my care"
>
> —"That I will not knowingly or intentionally do anything or administer anything to them to their hurt or prejudice...."[1]

An impressionable young woman, enveloped by the power embodied in these words, I felt breathless with pride at the prospect of dedicating my working life to the fulfillment of this oath. Many times, over the ensuing thirty years of medical practice, I have pondered over the fact that multitudes of people have entrusted you and me with their life and health, and have allowed us into the most private sanctity of their existence. As a profession, we have brought health care into an unbelievable realm of technological capability and for the most part, we have zealously upheld "Hippocrates."

Instead of offering praise, society has criticized the rising costs of medical care, has focused on perceived over-utilization and abuse, and has responded by relinquishing control of health care into the hands of administrators and marketing specialists.[2] It is unclear whether it was ever the consumer at large who was dissatisfied with our prior health care system. Maybe, it was merely an entrepreneurial justification to turn the health care industry into the multi-billion-dollar business that it is today.

Effects of Managed Care

Now, it is a daily struggle to honor the pledge embodied in the Hippocratic Oath. Today, the power to look out for the safety and welfare of those who entrust themselves to our care, is in the hands of the "non-professional" and the "profit motivated," and we, the doctors, are allowing them to orchestrate the practice of medicine. Hippocrates shudders! Recent attempts in Hawaii to restrict health care coverage to insurer determined "medically necessary" services, pierces a sword into the very heart of our Hippocratic Oath. The ethical issues raised by the divergent philosophies of "managed care" and "Hippocrates" create irreconcilable conflicts for physicians.

If managed care were able to eradicate abuses within the health care industry or provide the forty million uninsured with insurance coverage, we could justify what is happening by a promise of improved public health. But, these have not been among the successes.[3] Instead, insurance CEO's are becoming some of the country's highest paid and costs are moving from provision of medical services to marketing, administration and data compilation.

More than Hippocrates

Economically enforced restrictions on insurance coverage for medical services, which are at variance with physicians' beliefs, demoralize and de-professionalize physicians and lead to loss of our self respect and self esteem. We become torn between the need to comply with standards which are set by insurers and our professional loyalties to our patients. We are so intimidated into compliance, in order to maintain economic survival, that we even lose sight of the fact that it is we who have the license to practice medicine. We have forgotten that the only two essential parties to a successful health care transaction are the doctor and the patient. Have we ever heard someone in distress call out for a health insurer?

There are startling similarities between the process of de-professionalization of the medical profession which is taking place in Hawaii and the psychodynamic of abuse, as we have come to understand it. We, the victims, have been gradually indoctrinated to believe that we are no longer capable of thriving or surviving without the insurer and we are repeatedly subjected to abusive devices to further strip us of our power and enforce compliance. Examples of these devices include unduly intrusive credentialing, adhesionary contracting, threats of exclusion from segments of the market and "at will" termination. We walk on "eggshells" for fear of retribution.

There is Hope

Physicians and patients are becoming natural allies against health insurers who elect to use predatory conduct to restrict payment for valuable modalities of medical treatment. While cost-containment and economic efficiency are valid ambitions, withholding care from seriously ill people is not an acceptable means of fulfillment. Free market action can be a formidable force to encourage alternatives which meet consumer needs more effectively. In addition, the American legal system embodies well-settled legal analyses to approach dispute resolution through negotiation, mediation, legislation, and litigation, some of which have not yet been contemplated by our profession. As a second year law student at the University of Hawaii School of Law, I am introduced, almost on a daily basis, to legal theories and remedies which are definitely applicable to the problems of managed care. However, we must reach out to assert and protect our rights. The adverse party is unlikely to make concessions without convincing evidence of its necessity to do so.

The Hawaii Coalition for Health

In order to further these purposes, **Hawaii Coalition for Health** has been conceived and will be in operation in January 1997. We will be a non-profit corporation which will become a vehicle through which patients, medical providers and public advocacy groups may assert their rights to health. It will choose a high priority issue each year - for 1997, the "standard medical practice"/"medical necessity" problem has been chosen. In addition, the **Coalition** will be a resource for the public to substantiate information about their

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External Ophthalmomyiasis, A Disease Established in Hawaii

Cedric M. Yoshimoto, MD, MPH*, M. Lee Goff, PhD**

External ophthalmomyiasis, usually caused by the sheep nasal bot fly, Oestrus ovis L., *is characteristically a benign disorder in humans, but may rarely cause severe complications. It occurs on most of the inhabited Hawaiian islands, and is more common than indicated by previously published reports. A typical case is presented along with the fly's life cycle, clinical features, and management.*

Introduction

Myiasis in its broadest sense refers to the infestation of tissue by the larvae of flies (order Diptera). The consequences of such invasions may range from asymptomatic infestations to severe reactions and even death.[1] Various sites on a human host may be involved, depending upon the behavior of the particular species of fly, the types of clothing worn, other cultural practices which influence human contact with flies, and chance. Ophthalmomyiasis is the term for myiasis of the eye or its adnexae, and is subdivided into internal and external types, according to whether the globe itself is invaded.[2]

Internal ophthalmomyiasis is a relatively rare disorder and often leads to serious complications due to destruction of intraocular tissues. External ophthalmomyiasis is reported more frequently, but nonetheless is so striking a condition that its occurrence continues to elicit individual case reports in the medical literature. Although a case of external ophthalmomyiasis was reported in Hawaii as long ago as 1925,[3] only a few other Hawaiian cases have been published. As a consequence, many health care providers may be unaware of this disease, its manifestations, management, or potential complications.

Illustrative Case

A 63-year-old man was working on a car near his house in a residential section of Waianae (island of Oahu) when he felt a light "thud" in his left eye and thereafter experienced a burning sensation and tearing of the affected eye. His son examined the eye and saw something moving, but could not catch it.

The man sought medical attention. At the emergency department, he reported considerable irritation of the eye, slight visual blurring, and the sensation of a moving foreign body. Examination revealed swelling of the eyelids, marked lacrimation, mild injection of the bulbar conjunctiva, and numerous larvae about 1 mm long, rapidly traversing the bulbar and palpebral conjunctivae. Although instillation of proparacaine hydrochloride 0.5% ophthalmic solution did not appreciably slow larval movements, it improved the patient's comfort as the larvae were removed with the aid of a lightly moistened cotton-tipped applicator. About 11 larvae were recovered in this fashion.

On the following day, the patient was re-examined by an ophthalmologist, who discovered and removed one additional larva. Two days later, the patient reported no further irritation in the eye. The larvae were submitted to one of the authors (M.L.G.) and found to be the first instar (or stage) of *Oestrus ovis* L. (see Figures 1 and 2).

Fig. 1.—First instar larva of Oestrus ovis showing anterior segments and cephalopharyngeal skeleton. Magnification 125X.



* Waianae Coast Comprehensive Health Center
Waianae, Hawaii
** Department of Entomology
University of Hawaii, Manoa
Honolulu, Hawaii

Requests for reprints to:
Cedric M. Yoshimoto, MD, MPH
Waianae Coast Comprehensive Health Center
86-260 Farrington Highway
Waianae, Hawaii 96792

Fig. 2.—First instar larva of Oestrus ovis showing posterior segments and posterior spiracles. Magnification 125X.



Entomologic Aspects

Oestrus ovis L., the sheep nasal bot fly, is the most common cause of human external ophthalmomyiasis worldwide. This insect is a well-known parasite of sheep, goats, and occasionally other animals. While in flight, it is able to deposit its living larvae near their nostrils, an event which evokes considerable annoyance and sometimes causes the animals to fall to their deaths while attempting to flee (*oistros* = gadfly, sting, hence frenzy). The first instar larvae migrate into the nasal cavities and sinuses, feed upon mucous secretions, and ultimately develop into third instar larvae over a period of eight to ten months.[1] When mature, they drop or are sneezed out onto the ground where they pupate. Under Hawaiian conditions, they hatch into adult flies three to six weeks later. The adult does not feed during its lifespan of about four weeks. If humans are attacked, the sites of larval deposition are usually the eyes, and less frequently the ears, nose, or throat.[4,5] Humans are accidental hosts, in whom the larvae generally do not develop beyond the first instar.

O. ovis is now found in all sheep-rearing parts of the world.[6] It was probably introduced to Hawaii along with sheep in the latter part of the eighteenth century, was first recorded by Grimshaw from specimens collected from sheep on Kauai in 1896,[7] and is currently found wherever these animals are present.[8] Despite scanty records, it is also known from domestic or feral goats, *Capra hircus*,[9,10] which are present on most of the inhabited Hawaiian islands.[11] *O. ovis* larvae have recently been identified in feral goats from the Waianae Mountains of Oahu (unpublished observations).

Less common causes of conjunctival myiasis include the horse nasal bot fly, *Rhinoestrus purpureus* Brauer,[12,13,14] and the moose (elk) throat bot fly, *Cephenemyia ulrichii* Brauer,[15] neither of which is present in the Hawaiian Islands. The horse bot fly genus *Gasterophilus* may cause a subconjunctival infestation,[16] and both *Gasterophilus intestinalis* De Geer and *G. nasalis* L. have been reported in Hawaii.[8] However there are no reports of their causing human infestation here.

Hawaii also harbors fly species which can penetrate tissue readily, potentially causing internal ophthalmomyiasis. These include *Hypoderma bovis* L. and *H. lineatum* Villers.[8] Again, we are not aware of reports of ophthalmomyiasis caused by these species in this state.

Geographic Distribution

External ophthalmomyiasis due to the larvae of O. ovis has been reported from many parts of the world. It is particularly common in the Near East[5,14,17] and the Mediterranean basin.[4,18,19,20] Among the Berbers of North Africa, the condition is sufficiently prominent that it has a specific name, *"thimni"*.[21] It is also found in Russia,[22] south Asia,[23] east Asia,[24] southern Africa,[13,25] and South America.[26] External ophthalmomyiasis is occasionally reported from northern Europe,[27] Australia,[28] New Zealand,[29] and Canada.[30] It may be imported into a presumably non-endemic area by infested travelers.[31]

Within the United States, this disorder has been reported most frequently from Santa Catalina Island off the coast of southern California.[32,33,34,35,36] It is also known among sheepherders on the Navaho Reservation (O.H. McKinley, personal communication). Individual cases have been reported from at least twelve other states.

Human infestation with *O. ovis* has previously been described in Hawaii at least four times. One case was reported from Honolulu on the island of Oahu in 1925,[3] three confirmed and three unconfirmed cases from Puako on the island of Hawaii in 1956,[37,38] two cases from North Kona on the island of Hawaii in 1983,[10] and one case was acquired on the island of Maui and identified in Canada in 1985.[31] An investigation into the occurrence of external ophthalmomyiasis in Hawaii is in progress and has located more than 20 additional cases from the islands of Niihau (D. Jamieson, personal communication), Kauai, Oahu, Maui, Lanai, and Hawaii, with positive identification of *O. ovis* larvae in several of the cases (unpublished observations).

Clinical Features

A human victim may or may not feel the strike of the adult female fly as she deposits larvae. The usual symptoms of infestation include a moving foreign body sensation, itching, burning, and lacrimation.[19,20,35] Marginal corneal ulcerations may occur, producing pain and photophobia.[20] The patient or a companion may remove some or all of the larvae. The illness is generally self-limited,[20,35] lasting no more than about 10 days without treatment. These larvae have not been known to develop beyond the first instar in human conjunctivae.

Upon presentation to medical care, examination may reveal lacrimation, conjunctival injection, swelling of the lids, and possibly a punctate keratitis or corneal ulceration.[17,20] Careful examination with a slit lamp or other magnification will reveal the motile first instar larvae, about 1 mm in length, translucent white in color with anterior black hooks connected to the remainder of the cephalopharyngeal skeleton, and rows of spines between the 11 body segments (see Figure 1). The examiner should take care to evert or doubly evert the lids to facilitate the search,[20] since the larvae actively avoid the light by crawling into the sulci.

It is possible to demonstrate serum antibody to the three larval instars of *O. ovis* in sheep and goats,[39] but these tests are not commercially available for testing humans, nor are they necessary for clinical management.

Continued on Next Page

Management

The larvae should be mechanically removed, either by irrigation with a suitable solution or with jeweler's forceps, a lightly moistened small cotton bud, or other similar aid. Since the larvae are actively motile, avoid the light, and may cling to tissue by means of their hooks, removal may be facilitated by immobilizing them with cocaine, lidocaine, or pilocarpine drops. Cocaine (4% to 5% solution) is a very effective means of paralyzing the larvae,[40] but is often unavailable in medical offices in the United States. Lidocaine, usually available in the form of a solution for injection, has also been advocated.[40] Pilocarpine 1% ophthalmic solution, commonly available as a treatment for glaucoma, slows larval movement *in vitro* within about 5 minutes, although it may be less effective *in vivo* due to dilution with tears (P. Bjorkman, personal communication). Pilocarpine 4% ophthalmic solution may be more effective, but our experience with it is limited.

As many as 77 larvae have been recovered from a human eye at one time,[41] although a smaller number is more common. Removal may require more than one session due to fatigue of the patient and the operator. If the conjunctiva or cornea is significantly disrupted, consideration should be given to tetanus immunization and antimicrobial prophylaxis.

Submission of the recovered larvae to an experienced entomologist for positive identification is recommended. The reason is that the treating clinician should be alerted in the event that the infestation involves a fly such as *Hypoderma* sp., whose larvae may easily penetrate the eye, with potentially devastating consequences. The larvae may be preserved in 35% isopropyl alcohol (half-strength rubbing alcohol) or 70% ethyl alcohol.

Re-examination of the patient on the following day is strongly advised, because initial treatment often fails to detect all of the nearly transparent larvae hiding deep in the sulci.[20,42]

Symptoms and signs generally resolve within several days after complete removal of the larvae. Persisting symptoms should prompt further evaluation for remaining larvae or for complications.

Complications

Although external ophthalmomyiasis caused by *O. ovis* is virtually always self-limited,[20,35] serious complications are possible. Clinicians have observed marginal corneal ulcerations;[20] corneal abrasions, sometimes linear, suggesting injury by the adult fly in the course of striking the eye;[25] small conjunctival hemorrhages;[14] and punctate keratitis.[14] These superficial injuries may be managed by conventional means, with a topical antibiotic and close follow-up. Schenck reported one case probably caused by *O. ovis* in which larvae had penetrated the bulbar conjunctiva.[43] The most severe complication occurred in a case seen by Rakusin in South Africa. Larval O. ovis penetrated the globe, with resulting optic neuritis, panuveitis, optic atrophy, and visual loss.[44] Finally, larvae of certain other species of flies regularly penetrate tissues, and after initial deposition around the conjunctiva or ocular adnexae, may proceed to damage the globe.[16,45] Should internal ophthalmomyiasis be detected, treatment options include no treatment for a dead larva with no inflammatory reaction,[45] vitrectomy for an accessible larva producing inflammation,[46] and laser photocoagulation.[47]

In *O. ovis* ophthalmomyiasis, patients sometimes report sneezing or other nasal symptoms. These have generally been self-limited, suggesting the possibility of a local reaction to larval or adult fly products which have been carried by tears into the nasal cavity. There has been a case of an *O. ovis* larva physically entering the nasolacrimal duct,[48] from which it would have access to the nasal and sinus cavities. In these sites, the larvae may persist longer than in the conjunctivae.[4,49] Recently, there has been a report of *O. ovis* development to the third instar over about six weeks in the nasal and sinus cavities of a patient infected with the human immunodeficiency (HIV) virus.[50] There is also a recorded case of a larva negotiating the Eustachian tube to reach the middle ear.[4] These migratory complications of external ophthalmomyiasis may simulate direct larval deposition into the nasal cavity (or mouth or ear) by the initial fly strike.[4,5]

Conclusions

External ophthalmomyiasis, usually caused by the first instar larvae of the sheep nasal bot fly *Oestrus ovis* L., is generally a benign (but annoying) disorder in humans, producing a self-limited parasitic conjunctivitis. It is well known in certain geographic areas, particularly the Near East and Mediterranean basin, but is uncommon in the United States. Increased scrutiny in the Hawaiian Islands has revealed that it occurs much more frequently than previously reported. Greater awareness of this disease may facilitate its diagnosis, management, and the prevention of complications. Studies are in progress to determine its distribution in Hawaii, the animal reservoirs of *O. ovis*, and the potential for controlling or preventing infestation in animals and humans.

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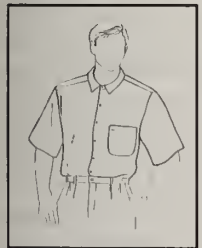
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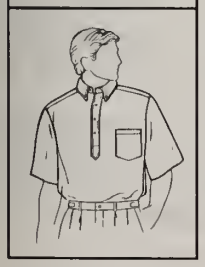




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Non-Insulin Dependent Diabetes Mellitus: an Epidemic Among Hawaiians

Ralph Beddow, MD, FACP and Richard Arakaki, MD
Department of Medicine, John A. Burns School of Medicine, University of Hawaii-Manoa

The Problem in America

An estimated 14-15 million people in the United States have diabetes mellitus, and greater than 90 % have non-insulin dependent diabetes mellitus (NIDDM) or Type II Diabetes. One-half of the NIDDM cases are undiagnosed. Moreover, when diagnosed, NIDDM has probably been present for 4 to 7 years prior to diagnosis, based on the presence of long-term complications at the time of diagnosis. Diabetes prevalence has increased dramatically in the United States over the past 30 years by approximately 50 % every 7 years. The large increase is probably due to a shift in the age of the population as well as accurate ascertainment of disease. In the past decade, diabetes incidence in the United States has stabilized (40% increase since 1980), and is presently estimated at 650,000 new cases per year.[1] However, the incidence worldwide and especially in the developing countries is steadily rising. The World Health Organization (WHO) has concluded that the "apparent epidemic of diabetes occurring worldwide is strongly related to lifestyle and economic changes".

Current data from the Centers for Disease Control and Prevention and the National Center for Health Statistics reveal the staggering impact of diabetes and its complications in the United States. Diabetes is among the 10 leading causes of death, the underlying cause in over 40,000 deaths per year, and a contributing cause in perhaps another 30,000 deaths.[2] The majority of adults with NIDDM die from macrovascular disease which includes cardiovascular, cerebrovascular, or peripheral vascular disease. Among deaths related to diabetes, cardiovascluar disease is the cause of more than 80,000 cases per year.[3] Diabetes is the primary diagnosis in almost 500,000 hospital discharges per year and the secondary diagnosis in almost 3 million hospitalizations in a year.

Diagnosed NIDDM is only the tip of the iceberg of an epidemic of glucose intolerance. Impaired glucose tolerance or IGT is even more prevalent than NIDDM. In addition to being a major risk factor for the development of NIDDM, IGT is associated with an increased risk for macrovascular disease. IGT is not associated with diabetes-specific complications of microvascular disease which includes retinopathy, nephropathy, and neuropathy. Among adults 20-74 years of age in the United States, estimates in 1990 and in accordance with WHO criteria, approximately 18% have some form of glucose intolerance (7% with NIDDM and 11% with IGT).[1] The major impact of aging is evidenced by the 42% prevalence of IGT and NIDDM in the population between 65 and 74 years. The risk of abnormal glucose tolerance is greatly increased in minority populations such as African Americans, Hispanic Americans, American Indians, Asian and Pacific Island Americans. On the basis of the continued growth of the fraction of the United States population older than 65 years, and of the ethnic and racial groups at particularly high risk of developing NIDDM and IGT, the overall prevalence of glucose intolerance is feared to increase in the next decade.

The Epidemic Among Hawaiians

In 1985, a Medical Task Force Report, researched and prepared by E Ola Mau, a consortium of Native Hawaiian Health Professionals, reported "From 1910 to 1980, in every major disease category, pure Hawaiians had the highest mortality rate. Rates for part Hawaiians were intermediate or similar to those for all races".[4] This report led to the enactment of the Native Hawaiian Health Care Act signed into law by President Ronald Reagan in 1988 which provides for resources to improve the health status of Hawaiians

The comparison of diabetes mellitus rates among Native Hawaiians and other races in Hawaii had been initially reported by Sloan in 1963.[5] Of 38,103 adults employed on Oahu, pure Hawaiians had a prevalence rate for diabetes of 48.8 per 1000 individuals as compared to a rate of 18.4 per thousand of all races. Part Hawaiians were found to have an intermediate rate of 26.6 diabetics per thousand. In 1966, a study conducted on the island of Niihau had identified 8 diabetics among 60 pure Hawaiian men, a prevalence rate of 12%.[6] The Molokai Heart Study had examined 247 adult Hawaiians between the ages of 20 to 59 on the island of Molokai, and reported a diabetes prevalence rate of 10% in women and 12% in men.[7] Most recently, the Native Hawaiian Health Research Project, a descriptive epidemiologic study of diabetes and heart disease risk factors among Native Hawaiians, have reported the highest prevalence rate of diabetes to date. In 1993, this University of Hawaii sponsored project examined with a 2 hour Oral Glucose Tolerance Test (OGTT) 177 adult Hawaiians over the age of 30 years residing in North Kohala. A diabetes prevalence rate of 18 % by WHO criteria was observed.[8] The combined results of all these studies clearly document the increasing rate of diabetes among Native Hawaiians over the past 30 years. As compared to the national trend, the prevalence rate is higher, and appears to be disproportionately increasing over 3 decades (Figure 1).

The Native Hawaiian Health Research Project has also reported an IGT rate of 16 % (Fasting Blood Glucose < 140 mg/dl, and a 2 hour value between 140-199 mg/dl during an OGTT, WHO criteria), the first assessment of IGT prevalence among Hawaiians. The

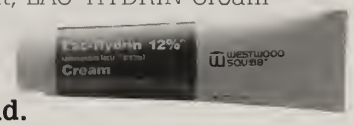
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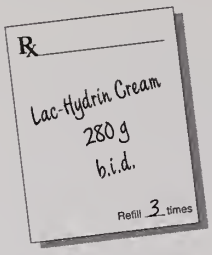
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CH_3

CLINICAL PHARMACOLOGY: Lactic acid is an alpha-hydroxy acid. It is a normal constituent of tissues and blood. The alpha-hydroxy acids (and their salts) are felt to act as humectants when applied to the skin. This property may influence hydration of the stratum corneum. In addition, lactic acid, when applied to the skin, may act to decrease corneocyte cohesion. The mechanism(s) by which this is accomplished is not yet known.

An *in vitro* study of percutaneous absorption of Lac-Hydrin Cream using human cadaver skin indicates that approximately 6.1% of the material was absorbed after 68 hours.

INDICATIONS AND USAGE: Lac-Hydrin Cream is indicated for the treatment of ichthyosis vulgaris and xerosis.

CONTRAINDICATIONS: None known.

WARNING: Use of this product should be discontinued if hypersensitivity to any of the ingredients is noted. Sun exposure (natural or artificial sunlight) to areas of the skin treated with Lac-Hydrin Cream should be minimized or avoided (see Precautions section).

PRECAUTIONS: ***General:*** For external use only. Stinging or burning may occur when applied to skin with fissures, erosions, or that is otherwise abraded (for example, after shaving the legs).Caution is advised when used on the face because of the potential for irritation. The potential for post-inflammatory hypo- or hyperpigmentation has not been studied.

Information for patients: Patients using Lac-Hydrin Cream should receive the following information and instructions:

1. This medication is to be used as directed by the physician, and should not be used for any disorder other than for which it was prescribed. Caution is advised when used on the face because of the potential for irritation. It is for external use only. Avoid contact with eyes, lips, or mucous membranes.
2. Patients should minimize or avoid use of this product on areas of the skin that may be exposed to natural or artificial sunlight, including the face. If sun exposure is unavoidable, clothing should be worn to protect the skin.
3. This medication may cause stinging or burning when applied to skin with fissures, erosions, or abrasions (for example, after shaving the legs).
4. If the skin condition worsens with treatment, the medication should be promptly discontinued.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Carcinogenesis: A long-term photocarcinogenicity study in hairless albino mice suggested that topically applied 12% ammonium lactate cream enhanced the rate of ultraviolet light-induced skin tumor formation. Although the biologic significance of these results to humans is not clear, patients should minimize or avoid use of this product on areas of the skin that may be exposed to natural or artificial sunlight, including the face. Long-term dermal carcinogenicity studies in animals have not been conducted to evaluate the carcinogenic potential of ammonium lactate.

Pregnancy: *Teratogenic effects: Pregnancy Category C.* Animal reproduction studies have not been conducted with Lac-Hydrin Cream. It is also not known whether Lac-Hydrin Cream can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Lac-Hydrin Cream should be given to a pregnant woman only if clearly needed.

Nursing Mothers: Although lactic acid is a normal constituent of blood and tissues, it is not known to what extent this drug affects normal lactic acid levels in human milk. Because many drugs are excreted in human milk, caution should be exercised when Lac-Hydrin Cream is administered to a nursing woman.

Pediatric Use: The safety and effectiveness of Lac-Hydrin Cream have not been established in pediatric patients less than 12 years old. Potential systemic toxicity from percutaneous absorption has not been studied. Because of the increased surface area to body weight ratio in pediatric patients, the systemic burden of lactic acid may be increased.

ADVERSE REACTIONS: In controlled clinical trials of patients with ichthyosis vulgaris, the most frequent adverse reactions in patients treated with Lac-Hydrin Cream were rash (including erythema and irritation) and burning/stinging. Each was reported in approximately 10-15% of patients. In addition, itching was reported in approximately 5% of patients.

In controlled clinical trials of patients with xerosis, the most frequent adverse reactions in patients treated with Lac-Hydrin Cream were transient burning, in about 3% of patients, stinging, dry skin and rash, each reported in approximately 2% of patients.

DOSAGE AND ADMINISTRATION: Apply to the affected areas and rub in thoroughly. Use twice daily or as directed by a physician.

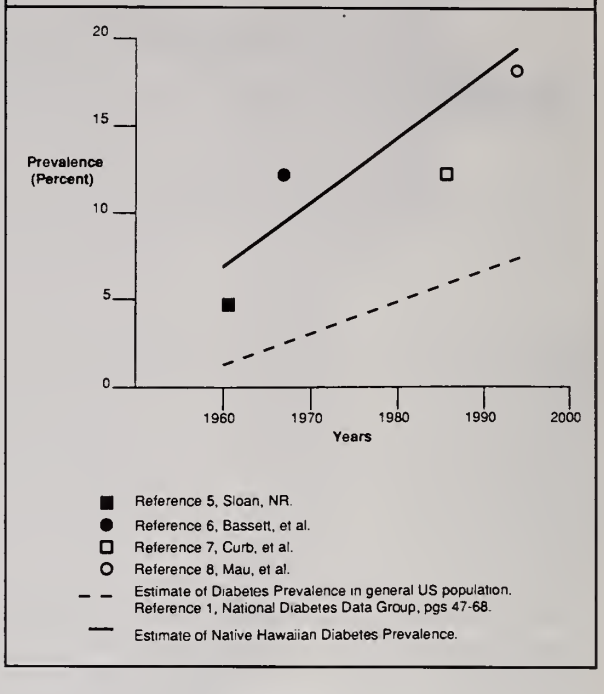
HOW SUPPLIED: Lac-Hydrin Cream is available in cartons of 280 g (2-140 g plastic tubes). Store at controlled room temperature, 15-30°C (59-86°F).

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Fig 1.—Prevalence estimates of diabetes mellitus in Native Hawaiians and the general U.S. population from 1960 - 1996.



IGT rate appears to equal the rate of diabetes, which places the rate of glucose intolerance among Hawaiians at 34 % or one in three adult Hawaiians over the age of 30. This rate of glucose intolerance is alarmingly nearly twice the rate of 18 % observed for the general United States population. Importantly, this combined rate of NIDDM and IGT among Hawaiians significantly contributes to increased CVD risk and may remain the primary factor responsible for the observed increased heart disease morbidity and mortality. The identification of the IGT population offers a glimpse of future NIDDM prevalence and the opportunity to intervene.

In Hawaii, approximately 8% of the State population is estimated to have diabetes. Thus, in a State of about a million people, about 80,000 individuals have diabetes, primarily adults with NIDDM. Among Hawaiians, based on the recent data from the North Kohala community, approximately one of five adults have diabetes. The State of Hawaii's adult Hawaiian population over the age of 30 is estimated to be 100,000 or 50% of the total population of 200,000 people.[9] Thus, 20,000 adult Hawaiians have diabetes which account for approximately one fourth of the State's diabetic population. This is clearly a disproportionate and unfortunate representation. In addition, among dialysis patients with diabetes, over 40% are Native Hawaiians which suggest an increased rate of diabetic complications among Hawaii's indigenous population.

Efforts to Prevent Diabetes and Diabetes-Related Complications

Despite the putative role for genetic factors in its developement, NIDDM may be largely preventable. Studies have demonstrated the adverse consequences of decreased physical activity and obesity, and the risk for developing NIDDM. These observations support the

role of potentially reversible factors in the development of diabetes. Among the most important factors associated with increased risk of developing NIDDM are obesity, age greater than 40 years, a history of IGT or gestational diabetes mellitus (GDM), a positive family history of NIDDM, and being a member of a minority population. These many risk factors are also associated with IGT. Approximately, 30-40 % of IGT individuals progress on to NIDDM over a 5-10 year period. The rate of progression is esitmated to be approximately 5 % per year and may be greater among higher risk populations. Women with GDM also have an approximate 10 year risk of 30-40 % for developing NIDDM. In recently industrialized countries and in migrating populations that previously had a low prevalence of NIDDM, changes in diet and an increasingly sedentary lifestyle, with consequent increase in body mass, have been associated with the development of NIDDM. It is apparent that the "epidemic of diabetes" may worsen in the future, and the need to intervene is overwhelming.

Still, we can take heart in a number of advances and new initiatives that may reduce the rate of NIDDM and diabetes-related complications in the future. The Diabetes Control and Complications Trial, a landmark study reported in 1993, has shown that lower blood glucose levels either prevent or decrease diabetic eye and kidney diseases.[10] Subsequently, many more studies have come to emphasize the relationship of lower blood glucose concentrations and reduced rates of complications among all diabetics. Thus, it is apparent that measures to improve blood glucose control among Hawaiians and all races with diabetes should reduce long-term complications. There are now many new options for the treatment of diabetes which includes new anti-hyperglycemic agents, multidisciplinary approaches to diabetes care, and easier means to monitor blood sugars and disease progression. However, the role of the patient to be compliant and be an active member of the diabetes management team cannot be over emphasized, and justifies major efforts to enhance diabetes education for these patients. Lastly, the large at-risk population of IGT individuals are offered a research program to determine if NIDDM can be prevented. The Diabetes Prevention Program is a five to seven year multi-center nationwide study to assess whether interventions of lifestyle changes and pharmacologic therapy can prevent diabetes among IGT individuals. As investigators in this Program, we seek our colleague's assistance in identifying these IGT individuals and working with us to possibly reduce the high prevalence of diabetes among Hawaiians and in the State of Hawaii.

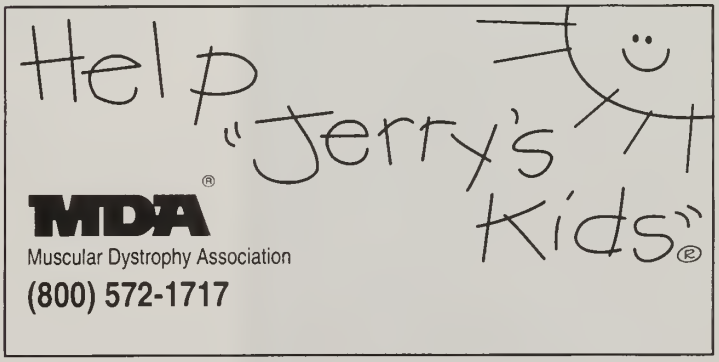
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External Ophthalmomyiasis, a Disease Established in Hawaii

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News and Notes Henry N. Yokoyama MD

Life in These Parts

Honolulu Magazine reports that Honolulu already has: 4 medical centers that do open heart surgery; 5 that do invasive catheter procedures; 6 that do catheter diagnoses; and 1 that does heart transplants.

By January 1997: Kaiser will be doing open heart surgery at Moanalua; Straub will have its new Cardiac Prevention Center; Castle will open its first cardiac cath lab and St. Francis will have its second cath lab.

Queens does 800 open heart surgeries and 2,000 cardiac caths a year; Kuakini does 300 heart surgeries; Straub does 250; Kaiser 235 and St. Francis 220 (not including 25 heart transplants since 1987).

Increasing aged, blind and disabled clients pushed Medicaid costs $62.4 million over the amount budgeted for this year. Emergency funding will be requested from the Legislature to cover costs through June. The state Dept. of Human Services will boost its next two year budget requests by more than $131 million just to meet the rising Medicaid costs.

Elected, Honored & Appointed

The late **Jeffrey Nakamura**, oncologist and leading researcher in the HTLV-1 virus (which may be responsible for Adult T-Cell Leukemia/Lymphoma) was honored in a dedication and blessing of the KMC Makai 5 oncology wing. Jeff died at age 42 on January 3 1991 of a ruptured cerebral aneurysm.

Kuakini Medical Center's medical staff elected **Edward Quinlan** as its Physician of the Year. Ed, director of radiation therapy, retired recently after 25 years. We'll all miss his friendly smile and twinkling eyes.

At the March of Dimes Governor's Ball and Community Service Awards Ceremony, held at the Hilton Hawaiian Village in October, two physicians, Oahu's **Calvin Sia** and Kauai's **Suzanne Nelson** were awarded the Jonas Salk Memorial Award for Maternal and Child Health.

Ryozu Yanagimachi, UH Medical School professor was awarded the Japan Academy of Science's International Prize for Biology for his research on in-vitro fertilization (A prize of 10 million yen, about $112,000 comes with the award).

Sportsmen

Rub of the Green (Mid Pac CC newsletter for November): 95 year old **Dr Takaki** Shoots His Age writes **Mike Okihiro**: "I never heard of any 95-year-old golfer shooting his age, but this is exactly what **Herb Takaki** did on Thursday, Sept 19. He turned the front nine with a 51 (which is not unusual for him). On the back nine he suddenly began to chip and putt as though he had two eyes (Herb is blind in one eye). His ball reacted as though it also had eyes. He parred two holes, suffered only a single buzzard and shot a 44." Mike also writes: "Herb retired ten years ago only because his nurse retired. In his youth Herb was into martial arts, kendo and judo, in a big way. While attending the University of Chicago, he was a Big Ten wrestling champ in his weight division for three years. Despite his ninety five years, he shows no trace of senility. He may forget a bet he has lost, but never forgets to collect one he has won. He smokes a couple of packs of cigarettes a day, but his immune system seems to have totally rejected all carcinogens. He has bacon and eggs for breakfast, eats four meals a day including daily portions of rich vanilla ice cream for dessert and shows nary a sign of atherosclerotic heart disease."

On a cool, windy November Sunday afternoon at Beretania, we watched the smooth power strokes of a young tennis player. Tennis buff Virgil Jobe told us that his son Ikaika is ranked first among 14 -year-olds.

Physician Moves

Pediatric and adult neurosurgeon **Michon Morita** opened his practice at Kapiolani Medical Center, 1319 Punahou, POB Ste 999.

Surgical Consultants of Hawaii, **Robert Oishi** and **Nancy Furumoto** announced the association of **Junji Machi**, MD, PhD and **Andrew J. Oishi** at Kuakini Medical Plaza, 321 N. Kuakini Street, Ste 305. The Colorectal Associates (**C.S. Sakai, R.J. Wong and G.B Lisehora**) at 1380 Lusitana Street, Ste 614, lost **Richard Omura** when he retired as of June 30.

General surgeon **Clifford Chang** also announced his retirement after 32 years of practice. He thanks his patients, colleagues and friends for their friendship and support throughout the years. Patient records have been transferred to P.S. Chan in the Interstate Building, Rm 707. Central Medical Clinic's pediatrician and pediatric hematology-oncologist **Arthur Osako** retired. His practice will be assumed by his associates **Elliot Tomomitsu and Derrick Kida.**

General surgeon **Brandt Lapschies** opened his practice at Kapiolani Medical Center at Pali Momi Medical Office Bldg., Suite 250.

Richard Friedman, board certified in internal medicine and geriatric medicine is the new medical director at Waianae Coast Comprehensive Health Center. Richard was professor of medicine at the University of Wisconsin for 25 years.

General surgeon **Roy Tanoue** retired as of Oct. 31. "To my patients for their trust and faith, to my peers and friends for their encouragement and help, a very sincere Thank you."

Orthopod **Donald Maruyama** announced that he will continue to practice orthopedic medicine with emphasis on workman's compensation, no-fault, sports and personal injuries at 321 N. Kuakini, Ste. 309.

Quotable Quotes

Surgeon Bob Oishi: "Simple—sounds simple, but it isn't all that simple." During an Oncology conference at KMC, moderator Ken Sumida asked Bob to comment on what constituted a simple mastectomy. A 44-year-old P2G2 Asian woman who faithfully had annual mammograms found a lump under her right nipple. She had a simple mastectomy. During the prosthetic repair, the surgeon removed a metastatic nodule from the flap. The problem was what to do next?

Toward More Picturesque Speech...Pretty Women

"Her beauty caused a crisis in my vocabulary" Mary Lou Finley

"When she had passed, it seemed like the ceasing of exquisite music." Henry Wadsworth Longfellow

"She had a smile I would accept as my last view of earth." Wallace Stegner, Reader's Digest, Nov '96

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He put the "rat" in "ungratitude"
She puts the "ache" in "forsaken"
She puts the "tank" in "cantankerous"
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He puts the "ox" in "obnoxious"
Kate Stronk

Continued on Page 21



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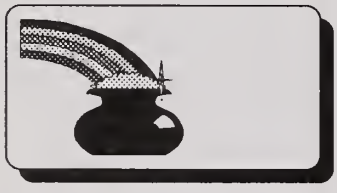
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Medical Oncologist needed in Hawaii.—This well-established, financially sound multi-specialty group, located in Honolulu is seeking a medical oncologist who is interested in being the sole oncologist from the group. The successful candidate will be a team player with an entrepreneurial spirit who is eager to build a busy practice and open to seeing some internal medicine patients. Physician compensation is productivity based + bonus + benefits. Send resume to: Kimberly J. Rocha, Chair, Physician Recruiting, The Honolulu Medical Group, Inc., The HMG Building, 550 S. Beretania St., Honolulu, HI 96813. Fax (808) 531-4179.

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The Words of Hippocrates!

Continued from page 9

health plan and to seek assistance in cases where payment for care has been wrongfully refused. The **Hawaii Coalition for Health** will grow and prosper through memberships and grant funding to be sought early in 1997.

Let us step forward now to reclaim the championship of our profession, together. "Hippocrates" awaits. **Please Join Us!** Write: 302 California Ave., #209, Wahiawa, HI 96786.

References

1. *The Hippocratic Oath*, Medical Graduates Association, University of the Witwatersrand, South Africa.

 American Medical Association, Principles of Medical Ethics, Report of the Council on Ethical and Judicial Affairs of the American Medical Association, June 1990, also "subscribes to a body of ethical statements developed primarily for the benefit of the patient. 1. A physician shall be dedicated to providing competent medical service with compassion and respect for human dignity."
2. Consumer Reports, October 1996, *Health Care. Special report, Part 2,*

 "Managed care has become a highly competitive, multi-billion-dollar business. But what's good for HMO's may not be good for consumers. In 1992, [the] traditional indemnity insurance and fee-for-service medicine was in need of change. (...) wasteful and costly, and left too many people without coverage. Then, 37 million people had no insurance; today, 40 million people have none." (p 28)

 "Today, HMO's generally spend about 17% of premiums on marketing, general and administrative expenses. (...) Health Net spends '$40-million plus' (...) to project a glowing image of itself. (...) Kaiser of Southern California, which never found it necessary to advertise before, added some $20-million in advertising expenses to its budget in 1995." (p 31-32)
3. See, reference 2.

Continued From Page 19

Medical Tidbits

(from Chet Nierenburg's column Mr Fitness)

Antioxidants usually include: Vitamin C, A, and E; Selenium; cysteine; ascorbyl palmitate. "Super oxidase" (SOD) is an antioxidant. Some authorities feel antioxidants prevent excessive oxidation by counteracting "free radicals." The free radicals are present from too much oxidation and are thought to be related to cancer and aging. But antioxidants do not enhance performance. There is some evidence that Vitamin E may prevent heart problems. Whether the other antioxidants have health benefits, only the future will tell.

Don't expose a new scar to sunlight. After a week to 10 days, the scab will fall off and expose pink skin which is extremely sensitive to sunlight and may become permanently discolored a dark brown. The hypersensitivity period lasts about 3 months.

Low back problems: Swimming is still one of the best exercises, but if you don't like swimming, then perhaps you should try boogie-boarding. Boogie-boarding entails a lot of kicking motion which is very helpful for building muscles in the lower back.

Rotator cuff injuries: Rotator cuff tendinitis, called impingement syndrome or bursitis, is the most common shoulder ailment I see. After age 40, it is a lot easier to get and a lot harder to heal. First, eliminate all shoulder pressing from your weight lifting, including bench press and military press. Secondly, start decreasing the weight and increasing the repetitions in your shoulder exercises. After ago 40, you should do at least 15 repetitions of any exercise. After age 50, raise the number of repetitions to 20.

Potpourri

A marine officer newly assigned to the American Embassy in Peru was warned that sanitation was primitive. So he drank alcohol instead of water. He was invited to a function at the Embassy and attended in full dress uniform. The music started and he spied a tall figure in a flowing red gown. He tapped the figure on the shoulder and asked politely, "May I have this dance?" The figure refused the invitation and gave these three reasons: "First you are drunk, second, this is not dance music, but the Peruvian National Anthem, third, I am the Archbishop of Lima." (Myron Shirasu heard the joke from his daughter who recently visited Peru).

A man and his pup were ready to board the city bus when he saw the sign "No animals allowed." He quickly turned away, unzipped his pants and concealed the pup. As he took a seat, the frisky pup managed to stick out his paw. Across the aisle were two nuns and they noticed the furry moving paw. Commented one sister to the other, "Sister Beatrice, I'm so glad I took my vows. Do you see all those teeth at the end of that thing?"

(another Myron Shirasu gem)

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To Undo the Past is Denied, Even Unto God.

The ordeal of John Zelko, MD of Hilo, Hawaii, has come to an end. In order to finally put the matter to rest, Dr Zelko agreed to pay $750 tribute to the Hawaii general fund and to practice good medicine for 16 months. He admitted to no violations, and no formal charge was recorded; the matter was resolved by an administrative action. The entire episode will be expunged after sixteen months if there are no further "violations" and since he did nothing wrong anyway, staying clean will not be difficult. Will there be a headline or even a story in the Hawaii Tribune Herald or the Honolulu Advertiser stating he was exonerated? No. Will there be a local TV news story telling of this useless and cruel persecution? No, again. Will there be any explanation by the state authorities as to why this 76-year-old physician and his family were abused in this fashion? Not a chance! But now and in the future, people will recall, "Oh yes, Dr. Zelko. He was mixed up in that drug thing." So how does John Zelko, MD get back his good name and restore his reputation? The truth is that we live in a state where the drug enforcement agency is out to get doctors, and the media take great delight in loudly publishing any story which even remotely suggests a physician get "caught." What happened to John Zelko has happened to others and could happen to any of us.

A Bird in the hand makes it difficult to blow your nose.

In Louisiana, a pharmacist took it upon himself to treat a patient's sinusitis, first with Soddgrass, then Super Snoddgrass, then Super De Snuff, and finally Nu-Triphenyl TD, a remedy containing phenylopropanolamine. The patient's blood pressure shot up to 270/150, he required emergency care, and although he survived, he suffered brain damage. At the liability trial, the plaintiff's claim against the pharmacist was dismissed because the court (judge) felt the issue of causation was not established, although the patient had no history of high blood pressure. The basic issue of practicing medicine without a license, a not uncommon pharmacist behavior, was not mentioned.

The HMO, has nothing, looks like everything. What more could one desire?

While some pharmacists are eager to practice medicine, some HMOs are not. A four year study in Boston of 2335 patients, age 18 to 97, including hypertension, non-insulin-dependent diabetes, recent acute nyocardial infarction, CHF, and depressive disorders, concluded that outcomes differed significantly between HMOs and fee-for-service in the elderly. Patients over age 65 (Medicare) got worse and were twice as likely to decline, 54% to 28%, under HMO plans as FFS. Conclusion: "Current health care plans should carefully monitor the health outcomes of these vulnerable subgroups." Previous studies have demonstrated that despite attempts by the administration and Congress to push Medicare patients into HMOs, 88% remain with fee-for-service. Apparently, the great majority of Medicare patients would rather visit their well-known doctor than queue up at the waiting room and be a faceless number, in hopes of saving a few dollars.

Photorefractive Keratectomy will generate lots of money—for the lawyers!

Cartels and monopolies are anathema to a free economy. However, in ophthalmology we have the Pillar Point Partners (PPP) which was established to eliminate competition and to control excimer use for keratorefractive surgery. Because they control the game, PPP assesses a $250 patent royalty for each laser use, and currently has infringement suits pending against Barnet-Dulaney Eye Center in Arizona and Laser Institute of the Rockies in Denver. Liz Davilla, EVP of Visx, Inc., and a spokesperson for PPP, said "We will spend several million dollars enforcing our patent right in 1997," as she addressed more than 1000 ophthalmologists prior to the recent AAO meeting. Counter suits have been filed accusing PPP of violating anti-trust laws. The current phenomenon of device and procedure patents is new to medicine, and doctors are struggling to understand and adjust. Obviously, a sense of good will, cooperation and collegiality disappears when conflicts arise between maker (designer), doctor and consumer.

People will believe almost anything that isn't so.

As so often demonstrated by the gullible public, the desire to accept testimonials for herbals, elixirs, eastern nostrums, etc., is always accepted before data from controlled clinical trials. Recently it was over the counter Melatonin for comfort and sleep, and now it's DHEA, dehydroepianodrosterone, the elixir of youth. DHEA is being pushed in health food stores and many large pharmacies, hailed as the hormonal fountain of youth. It is a naturally occurring hormone produced by the adrenals, and promoters claim it will improve memory, boost libido, build muscle mass, enhance the immune system, and even promote weight loss. Why not give a three month supply to all our legislators and get them off Melatonin?

People like sheep, tend to follow a leader—sometimes in the right direction

The November annual meeting of the Hawaii Ophthalmological Society at the Plaza Club dining room, featuring a presentation by Academy President Paul Lichter, and election of officers for 1997. President Cal Miura MD passed the gavel to John Portis, MD and so we are assured another year of powerful and gallant leadership. In addition, legislators Ron Menor and Romy Cachola were recognized for their strong work in the legislature in providing protection for Hawaii's citizens in the area of medical care.

The more things change, the more they stay insane.

In Arizona at the Alcor Life Extension Foundation, two medical scientists claim they succeeded in freezing a rat's heart at -320 deg. F., and then restarting it five days later. By extension, at some future date, a lab might develop an entire bank of frozen tissue removed from trauma victims, instead of the laborious hot, vital organ transplant system presently in use. Yes, and then would come the business people, comparison shopping, window displays, holiday special organ sales—a Brave New World even Huxley could not envision.

In the fight between you and the world, back the world.

If you feel that you are not taking home as much income as our colleagues on the mainland, you are right. According to the American Chamber of Commerce Research Association, the Honolulu cost of living composite index is 40% more expensive than Miami, but reimbursement for a first office visit is 10% less in Honolulu.

Addenda

- U.S. suicide rate is 15th among 25 developed countries. Higher rates—Canada, Japan, most of Europe and Scandinavia; lower rates—Ireland and United Kingdom.
- Jesse Jackson and Gerald Falwell are men of the cloth—cashmere.
- Graffiti in the men's room at the Plaza Club—"Dyslexics, untie!"

Aloha and keep the faith—rts ■

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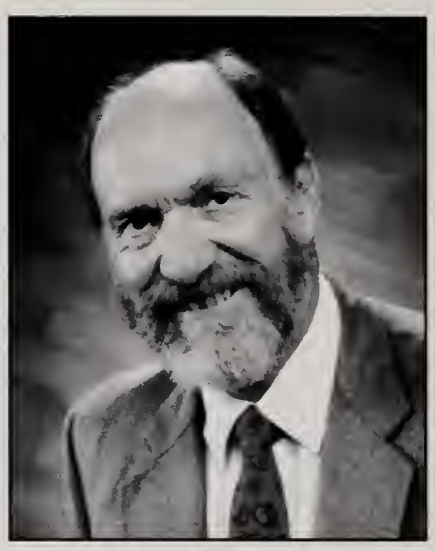
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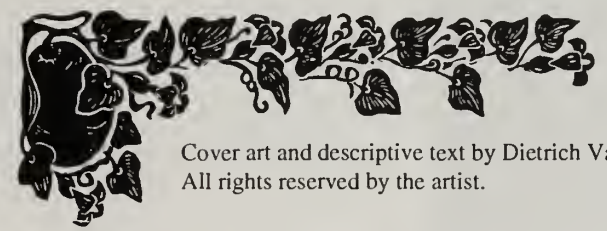
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Hawaiian *Holua* Sledder

Sledding down specially made ramps was a favorite sport among the chiefs of old Hawaii. *Pele* plays a prominent part in one account of this sport.

A Call to Physician Authors

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Editorial

D.A.D.D.
Doctor Assisted Death with Dignity

Norman Goldstein MD

The December 1996 Special Issue on Death and Dying (aka Death with Dignity) has already created a great deal of interest, as we expected. I sent a copy of this issue to each Executive Director or President of the 50 State Medical Societies, as well as Guam and the Virgin Islands, and other associations around the world.

Next month, we will reprint the speech presented to the National Press Club of Australia by the Honorable Marshall Perron, former Chief Minister of the Australian Parliament, on this important subject. Look for the special issue on Death and Dying-Part II in March.

Facts

1. In the 1996 Gallup poll, 75% of Americans surveyed said they would like to see a law permitting Physician Aid-in-Suffering for those rational terminally ill patients who request it.
2. In 1995 and 1996 surveys, more than 50% of physicians in Washington, Colorado, Oregon and Michigan believe it should be legal for physicians to help rational, suffering, terminally ill patients die who request it to die with dignity.
3. A majority of the more than 5 million voters in Oregon, California and Michigan passed a law permitting Physician Aid-in-Dying, which in actuality is a law protecting physicians who choose to aid the suffering, terminally ill, rational patient.

Despite the fact that the American Medical Association has officially taken an opposing position to Physician Aid-in-Suffering of the terminally ill patient, many rank-and-file physicians in Hawaii and across the country are in favor of assisting their patients to die, and have done so and will do so—though unfortunately they will not and cannot declare their position for legal reasons—at this time.

Hemlock Hawaii has a one-hour video tape of Geoffrey Fieger, Esp., attorney for Dr Jack Kevorkian, speaking at the Hemlock Conference in Denver, November 1996. It is a powerful tape, humorous, poignant and compassionate, showing that this is a patient's choice—yours and mine, and should not be governed by law. Every physician and attorney, medical and law school should have a copy of this tape; it is available by sending $15.00 to Hemlock Hawaii, P.O. Box 1423, Kailua, HI 96734.

Mahalo to the Hawaii Medical Library and Drs Ann Catts and Drake Will

As regular readers of the Journal know, the December issue contains a very extensive index for the year. The Editorial Board and staff really appreciate the efforts of the reference librarians at the HML for an excellent index—by subject and author.

Thanks also to the Library staff for the many computer searches conducted for the edition and our authors. The Library also sponsors programs to educate physicians and health providers on the World Wide Web/cyberspace.

Mahalo to Dr Ann Catts and the Library for the exhibit on Death with Dignity, pro and con. It was certainly very well done.

Many thanks to Dr Ann Catts and Dr Drake Will for helping to edit the Journal. Pathologists never truly retire—we keep them too busy to retire. Mahalo Ann and Drake!

The Hawaii Coalition for Health

Did you miss the commentary in last month's Journal by Arlene Meyers MD (aka Arlene Jouxson) entitled "The Words of Hippocrates!"? Arlene, now a second-year law student at the University of Hawaii School of Law, started this Coalition last month.

The highest priority for 1997 will be "the standard medical practice"/"medical necessity" to serve as a resource for the public to substantiate information about their health plan, and to seek assistance in cases where payment for care has been wrongfully refused.

You can join the Coalition. Call Arlene at (808) 622-2655 or fax her at (808) 622-5599.

Letter to the Editor

Chicken Skin Time

Eleanor "Andi" van der Voort RN
President of Hemlock Hawaii

Bundled in a lined London Fog Coat, woolen underwear and mittens, I arrive in Denver for the Ninth National Conference of the Hemlock Society featuring the topic "Death is Not the Enemy, Suffering Is." Not only the 70 degree temperature, but the people taking part in this educational and positive conference melted my heart. We worked our way through the many Anti-choice protester poster holders outside the hotel and even accepted them within the lecture rooms with their lap top computers. We were offered from morning to eve, dedicated, tireless workers testifying as to their progress in most of the 50 states represented, as far away as Alaska and Hawaii. Several legislators, many physicians and attorneys as well as the person on the street, from all walks of life, race, sex, age

Continued on Next Page



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and religion were present with one common goal: to assure that everyone in a terminal or incurable state, has the choice to do what they wish, at the end of their lives, in order to die with their loved ones, without suffering, with the help of a prescription of medication from a physician. At the last national polling, at least 74% of our citizens agree that this is our right. Legislation should not be needed but the Anti-choice people and some intolerant religions with large bank rolls and some of the AMA want to take this right away from us through legislation and we are being forced to fight back. Medicine has changed in the last 30 years: with the advent of sophisticated machines and medications, persons who would have died peacefully in prior years are now artificially forced to linger in a sometimes painful and cruel dying process.

This is not everyone's wish—*certainly not mine.*

Highlights of the conference was the talk, followed by questions and answers by Mr Geoffrey Feiger, the attorney for Dr Jack Kevorkian. His main message was "They" are trying to take away our right to die when and how we want. "They" would love to talk about this for the next 100 years. "They" will try to bankrupt us. "They" will do everything in their power to enforce their views on us - *we must fight this intrusion into our lives.* The video of Geoffrey Feiger, Esq. is available through the Hemlock Hawaii Chapter, which is listed in the Honolulu telephone directory.

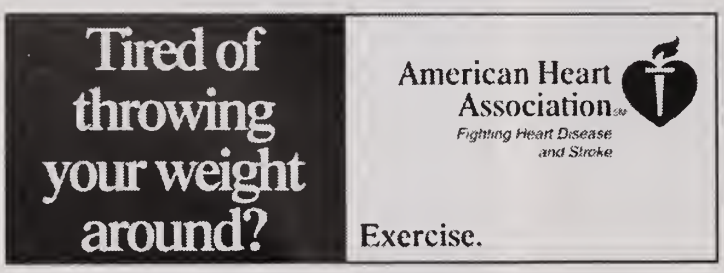
Editor's Note:
Andi van der Voort RN was born and educated in Canada, and received postgraduate training in psychology in Costa Mesa, California. She has worked at Queen's, Castle, and St. Francis Medical Centers. Though officially semi-retired, she now serves as president of Kaneohe Bay Toastmasters, Humanists Hawaii, and Hemlock Hawaii. She is far from retired! Mrs. van der Voort and her husband of 38 years live in Lanikai. She is a frequent speaker representing Hemlock Hawaii at civic and educational meetings Recently, she served on a University of Hawaii panel on Death with Dignity on the Big Island. This tape is currently aired on Olelo TV.

President's Message

John S. Spangler MD

This is the month for legislative action and many bills including medical ones will be debated and hopefully HMA will help with this as we have done in the past. We tend to complain about the government but we need to support the process and hope to make it better.

Also February is love month with Valentine's Day. You need to express your love this month!



Special Commentary

W. Mitchell Sams, Jr. MD
President, American Academy of Dermatology

Dermatology World (AAD) Vol #10
October 1996

An Open Letter to My Son

Dear Hunter:

Now that you have completed the first three years of medical school and are increasingly excited about patient contacts and your future role as a physician, I'd like to take this opportunity to pass on to you some thoughts that I have developed over many years of practice and that, if followed, are certain to make your own professional life more rewarding and your patients more satisfied.

- Don't forget to smile as you enter the patient's room. Such a simple gesture is terribly important and puts the patient immediately at ease.
- Remember that a patient often is frightened and lonely. Take the time and expend the effort to sit down with that patient, relax and just talk and listen, rather than standing as though you are in a hurry to leave the room.
- Write your notes about the patient and your prescription in the patient's room. It is much more meaningful to them and permits you to spend more time with the patient. They may think of other questions important to them when you are relaxed.
- Touch the patient, even if just lightly on the arm. This shows you are not afraid of catching whatever they have (whether skin disease or not), but also conveys concern and understanding. It can be a magnificently important gesture.
- Learn some "nonessential" information about the patient, such as hobbies, recent trips, children's achievements and ambitions. Then make a note of this in the chart and bring up the subject again on the next visit. You will be amazed at how impressed the patient is with your "memory" for these events.
- It is o.k. to express confidence in helping the patient that may not be totally justified by the options. The patient's confidence in you and in the real possibility of improving his or her condition can enhance the healing process.
- At the same time, tell the truth. If the disease is not curable (such as psoriasis or atopic dermatitis), say so, but quickly add that it can be controlled with appropriate therapy. I liken psoriasis to arthritis or diabetes; neither are curable but both are usually controllable. Patients seem to understand and accept that better.
- If you are running behind schedule, apologize to the patient as you enter the room. It puts them off guard if they were planning to complain and lets them know you are aware that their time is also important.
- Express your appreciation often and sincerely to the people who help you be what you are—your colleagues, your nurses, your residents, your receptionists. You will not be a success without them. Be sure you let them know that.

Continued on Page 33

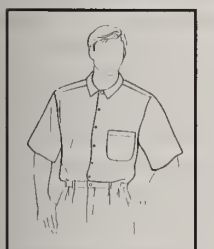
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Medical School Hotline

The Role of the Basic Sciences in Medical Education

by Martin D. Rayner PhD
Professor of Physiology
Assistant Dean for Research
John A. Burns School of Medicine (JABSOM)

Long before the inception of the School of Medicine in 1967, there has been active debate concerning the design of its curriculum. Physicians have reminded us that they remembered little from their first two years of medical school, and that all the physiology and biochemistry they ever use was picked up during their 3rd and 4th years, mostly from their time in internal medicine. Apparently, the most memorable basic science information was the most relevant to clinical practice.

Throughout the 70's and early 80's, questions were being raised, both in Hawaii and on the mainland, as to whether there was something indefinably, but radically wrong with the standard curricula in medical education. There were too few clues as to how the perspectives of the different Basic Science disciplines should be put together to generate those cross-disciplinary understandings which provide the basis for medical practice. Also, there was concern that students were being taught to "perform" medicine but not being taught the skills needed to obtain satisfaction from the professional life on which they were embarking. Effective problem-solving skills and human interaction skills are profoundly important components of the successful physician's life-style. Where were these skills being taught in the medical curricula?

Then, in the late 80's, JABSOM was introduced to a set of ideas which clearly addressed the concerns noted above. The problem-based ("PBL") method provided an interdisciplinary, case-based, basic science curriculum. It was obvious that this approach placed significant emphasis on major skills which were missing from the traditional curriculum—and that it emphasized thought-processes rather than mere memorization of facts.

However, every innovation creates its own problems. It seemed that the establishment of an interdisciplinary curriculum reduced the significance of the traditional disciplinary basic science departments in medical education. No longer was there any specific component of the curriculum for which a given disciplinary department could be held responsible. The Basic Science departments came to feel that they were little more than a source of "warm bodies" for the interdisciplinary tutorial mill, while the skills of charismatic lecturers seemed no longer valued in medical education. Although students often asked for more didactic teaching, those same students seemed surprisingly unwilling to return to a passive listening role. Over time, some basic science faculty came to fear that well prepared primary care physicians were more acceptable as tutors than experienced basic scientists. Were the basic sciences being pushed aside?

What then, is to be the future role of the Basic Sciences in the John A. Burns School of Medicine? Just as critically, who should be making this decision? These questions have reverberated through the school, the entire university and the medical community.

Despite the negative viewpoint expressed above, it must be obvious that we should retain a community of basic biomedical scientists who are active at the cutting edge of their respective fields. Both students and the larger medical community need to have access to content-experts who can ensure that new knowledge spreads from the bench to the hospital bedside and, further to the community clinic. This goal can be achieved, in part, by improving the opportunities for interaction between the basic researchers and both students and active physicians. JABSOM is already exploring ways to achieve appropriate interactive office hours at which medical students meet in small groups with faculty content-experts. In addition, the Kapiolani-based Clinical Research Center, the Pacific Health Research Institute, the Queen Emma Foundation and other similar community organizations are working to both foster research and bridge the gap between basic scientists and clinicians.

To dispel the fears which arise when change of one kind or another seems inevitable, the following details require our careful attention:

First, we must continue to recognize the value of the basic scientists as tutors who can ensure that the molecular, structural and functional issues are pursued by students to an appropriate level. In addition, Basic Science input is needed in the design of the health care problems used in the Problem Based Learning curriculum. Interaction between physicians and basic scientists in the continual revision of the PBL cases is a powerful bridge-building experience. This interactive process is also essential in the creation of the best computer-based, self-instructional system to support our students' education.

Second, we need to remember that basic biomedical research is a vital underpinning for the education of our medical students. Without active research programs in this school we will be unable to provide our students with those research experiences which will teach them to approach new findings in an appropriately critical manner. Medical education may suffer if research is over-emphasized, but it will just as certainly suffer if research is under-emphasized. Our duty is to seek the appropriate balance—and to foster basic/clinical collaborations wherever possible. And, just as our PBL curriculum is fundamentally interdisciplinary, so too is most cutting-edge research. Thus, potential new hires into the basic sciences need to be evaluated as to whether the applicant's expertise will help support medical education and whether his/her research activity will appropriately strengthen and/or enlarge our current research base. In the 1960's and 70's, the needs of the school could be addressed effectively by individual, disciplinary departments. This is no longer true. The rights of the old disciplinary departments need to be reassessed from a broader, more school-wide perspective.

In summary, the Basic Sciences remain a vital part of medical education. However, change is relentless. The former charismatic lecturer becomes an equally charismatic content expert to be sought out by students and faculty alike. The physiologist or biochemist of yesteryear may now be a biophysicist in the Department of Medicine. Anatomists may show up at Surgery Grand Rounds and PhD pharmacologists may make rounds with the Internists. But all this seeming confusion brings a new excitement both to our teaching and to our research. The more we change, the more effectively we retain our mission as basic scientists: to help our students to obtain the basic structural and functional understandings at the molecular, cellular and organismal levels which will allow them to function as effective physicians for the coming age.

Military Medicine

Disaster Medicine in Honolulu

Benjamin Berg MD

In 1994 a congressionally supported program initiated operation in Honolulu. The Center of Excellence in Disaster Management and Humanitarian Assistance (COE) was developed as a direct result of lessons learned during crises in the Middle East, Sub-Saharan Africa, and the Balkan region. The COE was conceived and mandated as a world-class organization to provide facilitation of education, training, and research in civil-military operations for response to international disaster management and humanitarian assistance projects.

The structure of the COE is a unique amalgam of Military and civilian resources. A cooperative partnership of the United States Pacific Command (PACOM), The Pacific Regional Medical Command of Tripler Regional Medical Center, and the University of Hawaii has been established to operate the COE. These organizations provide the academic and operational resources which are the foundation of a true model Center of Excellence. An international faculty of recognized leaders in international humanitarian operations provides the scholarly and operational expertise for the COE. The COE employs a staff which facilitates needs assessments, curriculum development, conferencing, training programs, research, and an education based electronic information network. The COE also provides evaluation and development for disaster management and humanitarian assistance, especially where civil-military coordination is required.

Complex humanitarian emergencies are tragic events. They frequently occur in developing countries, which have limited economic resources, and volatile political environments. The Asia-Pacific region encompasses 59% of the world's population, and 70% of the world's natural disasters. The genesis of such complex humanitarian emergencies most frequently include warfare, natural disasters, political and social isolation of populations, and other geo-economic factors. Earthquakes, volcanic eruptions, floods, tsunami, and cyclones contribute to the incidence of natural disasters in the region. Developing countries are at the greatest risk of such complex emergencies, and are at particular risk of natural disasters becoming catastrophic public health emergencies, and destabilizing tenuous social and political environments. Not uncommonly, disasters become complex humanitarian emergencies, under such circumstances. Assistance for specialized health care, sanitation, nutrition, logistics, shelter, and water is required to minimize death and suffering. The COE, by anticipating and training those who will work together during relief operations, serves to establish and maintain self-reliance, security, and vigilance.

The integration of relief operation requires coordination of many diverse organizational elements, to optimally allocate resources. There are numerous examples of poor coordination resulting in wasted resources and ineffective relief. The 1988 Armenian earthquake was one such event. Governmental and non-governmental organizations have not had mechanisms for coordinating efforts during many disaster response missions. The multitude of responders involved in massive relief missions, including Red Cross, United Nations, non-governmental volunteer organizations, military, and other international relief societies, exemplifies why coordination is the key to effective and efficient operations. The mission of the COE is to facilitate cooperative, coordinated, and integrated disaster response capabilities through it's activities in the Asia-Pacific region. The COE has collaborated with Government, Military, UN, ICRC, Red Cross and Red Crescent Societies, Non-Governmental Organizations (NGOs), and CDC.

The COE has sponsored numerous on-site and transportable educational programs. Most recently a local seminar in training for rapid response to terrorist activity was conducted in Honolulu. Seminars for training and regional needs assessment have been conducted in Indonesia, Malaysia, Singapore, Thailand, the former Yugoslavia, and the US mainland. In addition to training military personnel in operations other than war, the COE hosts meetings between agencies. The Switzerland based International Committee for Red Cross, for example, was not comfortable associating with the military combatants. The COE provides a medium to facilitate effective communication in situations where cultural barriers may be barriers to productive working relationships, such as this.

The Staff of the COE is lead by Dr Frederick (Skip) Burkle MD, MPH, who is a professor of Pediatrics and Chair of the Emergency Medicine Division at John A. Burns School of Medicine. Dr Burkle is also a Naval reserve officer, with the rank of Captain. He served in the Gulf War and is the author of the first published textbook of Disaster Medicine. He is an expert in Complex Humanitarian Emergencies and Triage. As a recognized international authority in Disaster Medicine he leads a world class organization.

A major component of The Center of Excellence is the **Pacific Disaster Management Information Network** (PDMIN), an electronic information and development center. The primary focus of the PDMIN is an Internet presence via World Wide Web architecture which features: select links to other disaster-related Internet sites; disaster-related news and weather reports; historical data; Pacific Rim disaster-related information; information on current disasters; electronic journals and newsletter; discussion and e-mail groups; fully-searchable full-text publications including country-specific disaster management handbooks and plans. The World Wide Web enables user-friendly global access and retrieval of a wide variety of information. The current URL is http://204.208.4.136.

An Open Letter to My Son

Continued From Page 30

This is such simple advice that we often forget it. But you can imagine how important it is only if you have been the patient rather than the doctor. Start now and all of these traits will be with you for your professional lifetime.

Love, Dad

Editors note:

This letter appeared in the American Academy of Dermatology report in *Dermatology World* Vol. No. 10, October 1996 page 3. In his provisions letter Dr Sams said "I have received more comments about that particular essay than any of the others I have written thus far. I am, indeed flattered that you would wish to publish it in the *Hawaii Medical Journal* and I would consider it an honor to have it there." This letter of fatherly advice should be presented to every medical student.

Methamphetamine Abuse: An Overview for Health Care Professionals

David A. Wolkoff MD, Resident
Department of Psychiatry, John A. Burns School of Medicine, University of Hawaii

Methamphetamine is a stimulant and drug of abuse. Its use has shown a recent reemergence nationwide, most notably in Hawaii. Much of this increase is accounted for by smokable crystallized methamphetamine "ice". Its acute effects include cardiovascular and psychiatric disturbances. Chronically, structural and functional brain damage may occur. Psychosis may occur acutely or chronically, and sometimes even in abstinent patients.

Case Report

Ms. B. is a 30-year-old woman who presented to the emergency department of a major urban hospital in Hawaii, asking for "drug detox". She stated that she came in because she felt suicidal after relapsing from about 2 weeks of abstinence from crystal methamphetamine use. She had recently been admitted to an inpatient drug treatment facility, and had left against medical advice 3 days prior to presenting to the emergency department. She stated that she had felt that she was "strong enough to stay off ice"; however, she soon encountered someone with whom she had used ice in the past. Immediately thereafter, they went to buy and then smoke crystal methamphetamine (ice). The patient denied any other psychoactive drug use in the past 2 weeks. She presented at 6 am on a Sunday, about 6 to 8 hours after having last used ice.

Ms. B. admitted to problems with alcohol in the past, but denied using much alcohol since starting to smoke ice about 6 months ago. She had been seeing a psychiatrist for supportive psychotherapy.

She had recently separated from her husband and has been homeless since leaving the inpatient facility 3 days ago. Ms. B. reported that she had been staying with friends since then; she admitted that some of these friends also use ice. The patient stated that she was taking cimetidine for gastrointestinal reflux, but was on no other medications and had no other medical problems.

On physical exam, the patient was fatigued and somewhat dishevelled. Her pulse was 126, blood pressure was 145 over 88, respirations were 24 per minute, and temperature was 100.4 degrees Fahrenheit. Her pupils were reactive and 5 mm bilaterally. She exhibited no signs of head trauma. At rest, she had a fine tremor of the hands. She had mild hyperreflexia, but exhibited no focal neurological deficits, and the remainder of the exam was normal.

Behaviorally, the patient was noted to be restless and did not maintain eye contact. She was often uncooperative with the exam. Her speech was pressured, but normal in volume. Her mood was irritable; her affect was mood-congruent but constricted. She admitted to both auditory and visual hallucinations, stating that she had been seeing shadows and hearing voices which she described as "mumbo jumbo." Her thought processes were disorganized and often tangential. She was occasionally paranoid about various friends. She was oriented to person, but not to place or time. Cognitively, she exhibited markedly diminished memory for recent events. The patient did not exhibit violent tendencies, and she denied current homicidal ideation, but she did admit to throwing rocks at parked cars earlier in the morning. She also reported fleeting thoughts of jumping in front of a bus over the past 12 hours.

On laboratory examination, the patient's qualitative urine toxicology screen was positive for methamphetamine and benzodiazepines.

The patient was given risperidone, 1 mg orally, and was then observed in the emergency department for 3 hours. As she continued to exhibit suicidal and paranoid thoughts, she was admitted voluntarily to a locked psychiatric ward for treatment. She progressed well in the hospital and was discharged after 4 days with instructions to follow up with a rehabilitation program. The patient was subsequently lost to follow-up.

Introduction and History

Methamphetamine is a synthetic amine belonging to the amphetamine class of drugs. It has stimulating effects on both the central and peripheral nervous systems. Although they have been and continue to be prescribed by physicians, amphetamines are increasingly being used for illicit purposes, both in the U.S. and abroad. Unfortunately, although methamphetamine is a chemical that does not occur in nature, it is all too easy to obtain or to synthesize (detailed instructions for doing so can be obtained over the Internet).

Originally synthesized in 1887 by a German chemist, it was not until the 1930's that amphetamines became used therapeutically. During the 1930's and 40's, amphetamines of various types were promoted by American pharmaceutical companies as therapeutic for a number of ailments, supposedly without any risk of addiction. Over the same period, in Japan, large quantities of methamphetamine, mostly in pill form, were manufactured for domestic consumption. After the war, Japanese pharmaceutical companies followed the lead of their American counterparts, launching a large promotional campaign for over-the-counter methamphetamine pills that were in abundance at former military warehouses. Thus it came to be in Japan that the first large-scale epidemic of methamphetamine use occurred.[1]

Reprint requests to:
David Wolkoff, MD
Department of Psychiatry
1356 Lusitana Street
4th floor
Honolulu, Hawaii, 96813.
No funding from any source was obtained for this article.

In the U.S., where a prescription was still needed to legally obtain amphetamines, the epidemic was slower in coming. However, by the 1950's, nonmedical use of amphetamines had spread to the civilian population, mostly those in need of stimulation to keep awake or fend off boredom in repetitive or monotonous tasks. Not surprisingly, truck drivers, college students, athletes, and housewives made up the first major wave of amphetamine abusers in the U.S. At the same time, prescription amphetamines, including methamphetamine, continued to be promoted as therapeutic for hyperactivity, obesity, narcolepsy, and depression.[2]

In the 1960's, intravenous use of methamphetamine became more popular, especially among those who had already been using illicit drugs. This group was apparently the first to use methamphetamine solely for its euphoric effects, rather than for its stimulating or anoretic properties. This "second wave" of the American epidemic was largely held in check through law-enforcement and public health efforts to educate and treat abusers and potential users. Japan had similar campaigns, with particularly stiff penalties for drug manufacture or importation.[3]

However, by the mid-1980's in the U.S. (and even earlier in Japan), a rapid increase in methamphetamine abuse began. This "third wave" began with the introduction of a potent, smokable form of crystal methamphetamine, known as "crystal", "glass", or "ice" on the street. In the Philippines, and among the Filipino expatriate communities in the U.S. (especially in Hawaii), it has been known as *batu* (Tagalog for "rock").

This newer form has been gaining in popularity over the intravenous form due to its ease of use, and over the oral form due to its rapidity of CNS effect (and thus a more potent "high"). It has also attracted users of "crack" (smokable cocaine), due to the longer duration of the "high" or "rush". In fact, users of crack cocaine report being unable to distinguish the clinical effects of crystal methamphetamine (ice) from that of crack.[4] In Hawaii, where crackdowns on marijuana production and sale have recently taken place, part of the boom in crystal methamphetamine use may be due to lesser availability of marijuana and other drugs.

Epidemiology

The routes of administration of methamphetamine include oral, intravenous, and by inhalation of its smoke. According to a study done in three American cities in 1994, the total number of users employing each of the three modes of use was nearly equal (i.e., one-third each). Of note, however, was that the percentage of methamphetamine users in the Honolulu group who preferred the smokable form was 92% (versus 10% for San Diego and 8% for San Francisco).[5] This suggests an altogether different epidemic in Hawaii compared to the Mainland.

The reasons for this difference are unclear, but there are some other interesting differences between the usage patterns in Hawaii versus the Mainland: users in Honolulu were significantly younger, less educated, much more likely to come from a family in which the parents used marijuana or cocaine, and more likely to have begun using methamphetamine recently. Those in the Honolulu group were also more prone to violence, assaults, shoplifting, money problems, and weight loss.[5]

There were also differences in age and ethnic background, but it is difficult to assess whether this is due to the different composition of the Hawaiian population. In a study looking at ice users on Oahu, the using population was more likely to be young (59% under age 20, compared with only 30% in the population at large). Additionally, Filipinos, Hawaiians and part-Hawaiians were represented disproportionately (23% of users were Filipino versus 12.6% in the general population, while 35% were Hawaiian/Part-Hawaiian, who represent just 10.7% of the population, according to census figures). Japanese, Korean, Chinese, Caucasian, Hispanic, and Black were all underrepresented ethnicities.[6] However, it is worth keeping in mind that data for ethnic background were self-reported, and thus could be susceptible to bias.

Acute Effects

The acute clinical effects of all psychostimulants, including the amphetamines and cocaine, are strikingly similar.[7] Methamphetamine differs in its sympathomimetic actions from other amphetamines in that it exerts fewer peripheral effects (e.g., tachycardia) and more CNS effects (e.g., euphoria), possibly due to a higher CNS penetration.[2]

The physical, or peripheral effects of methamphetamine are mediated by the autonomic nervous system and include: tachycardia, tachypnea, tremor, hypertension, dry mouth, mydriasis, and blurry vision. The mechanism for these effects appears to be methamphetamine's ability to stimulate release of norepinephrine at nerve terminals and of epinephrine from the adrenal medulla.[8]

Potentially lethal toxicities of methamphetamine overdose are most commonly seen in first-time users who take a single, large dose.[8] Worrisome symptoms include hyperthermia, arrhythmias, and marked hypertension. Permanent neurological sequelae may also occur: cerebral infarcts can result from ischemia or hemorrhage secondary to a sudden, massive increase in blood pressure; also, direct neurotoxicity can result from central hyperthermia, which is easily exacerbated by increased muscular activity in agitated patients.[2] In addition, myocardial infarction and acute pulmonary edema have been associated with methamphetamine ingestion.[9,10]

The central effects of methamphetamine apparently result from its structural similarity to the catecholamine neurotransmitters that are active in the CNS (e.g., epinephrine, norepinephrine, and dopamine).[4] Behaviorally, users of methamphetamine report increased energy, perception, self-confidence, and sexuality, as well as a sense of euphoria.[7] However, they also commonly experience irritability, impulsivity, impaired judgement, and insomnia, as well as such non-behavioral CNS effects as nausea, dizziness and anorexia. Psychotic behaviors such as hallucinations and paranoia are other potentially dangerous manifestations of acute toxicity, and can lead to irrational, suspicious, and often violent behavior, which may persist for days or even weeks.[2] The risk of homicidal or suicidal attempts is significant in such patients.[11] These patients pose a special challenge to care providers in the emergency setting, as the psychosis is often clinically indistinguishable from paranoid schizophrenia. One characteristic feature of these psychotic episodes is that, like drug-induced psychoses in general, they frequently involve vivid visual or tactile hallucinations.[8]

Chronic Effects

Chronic abuse of methamphetamine can lead to neuron loss secondary to microvascular damage, as well as to a depletion of dopaminergic neurons, both of which may be permanent.[8] An example of a sequela that may be due to this effect on dopaminergic neurons, ostensibly on those in the substantia nigra, is the movement disorders that are sometimes seen in patients using methamphetamine, as well as in those who have quit.

Another effect of chronic abuse of methamphetamine is the CNS "kindling" phenomenon, also referred to as "reverse tolerance". Patients who have used amphetamines over a long period, especially those who have had psychotic episodes from its use, may be pushed into a frank psychosis by even very small amounts of an amphetamine (or indeed by any psychostimulant, including caffeine and nicotine).[8,12] The mechanism for this kindling phenom-

enon is uncertain, but it may involve alterations in dopaminergic sensitivity of the striatum.[8] This is discussed further in the next section.

Some investigators also point to the existence of a chronic psychosis, termed "withdrawal" or "abstinence" psychosis, secondary to long-term use of amphetamines. However, some believe that these patients should be considered to have had latent schizophrenia that may have been brought out, rather than caused *de novo*, by amphetamine use.[13,14]

Tolerance and Sensitization

Tolerance develops for some of the effects of methamphetamine, especially those acting via the peripheral nervous system, as well as for certain CNS effects (such as euphoria, anorexia, and hyperthermia).[7] However, the reverse is true for effects on judgement, impulsivity, aggression, and susceptibility to paranoia, delusions, and hallucinations. In other words, while it takes more and more drug to achieve a desired high, and while these users acquire a decreased sensitivity to tachycardia and hypertension, they are actually more likely to exhibit pathological, often violent or self-destructive behavior even with no escalation in dose (or indeed with a decrease).[8] This sensitization illustrates the effect of the kindling concept mentioned above. Further, since tolerance develops relatively rapidly, users often end up at doses 50 or 100 times greater than the dose they began with. Although they are physically better able to handle these massive doses than would be a drug-naive subject, psychologically they are actually less so. In fact, the relative lack of significant physical effects may give some users a false sense that they can "handle" the dose.

Addiction and Withdrawal

The degree to which methamphetamine is addictive depends greatly on the type and route of administration. Methamphetamine taken by a method that delivers a large bolus of active drug to the brain all at once, such as the IV or smokable forms, gives a much more intense, albeit shorter-acting, euphoria than does the 'traditional' oral form. Both of these pharmacodynamic differences contribute to the stronger potential for addiction of the rapid-acting formulations: users of these forms get the most positive reinforcement for taking the drug, due to stronger associations between administering the drug and experiencing pleasurable feelings. Thus, smoked methamphetamine (ice) is, as one would expect, much more addictive than oral methamphetamine, which is in turn twice as addictive as amphetamine.[2]

One would also expect smokable methamphetamine to be similar in its addictive potential to smokable cocaine (crack), given that their euphoric effects are virtually indistinguishable. However, the duration of euphoria with ice smoking is much longer than it is for crack smoking (subjective half-life is about 5 hours for methamphetamine, versus only about 50 minutes for cocaine).[8] This difference would be expected to cause crystal methamphetamine to be less addictive than crack, but this remains to be proven in humans.

Patients who are dependent on methamphetamine and then discontinue use suddenly are prone to both psychological and physical withdrawal. The psychological reaction can vary from vague feelings of malaise to cravings to extreme agitation or depression. Later, more physical symptoms, such as polyphagia and hypersomnolence commonly occur. Depressed mood and energy level may be protracted for as long as 4-6 months in severely dependent patients.[2] Patients frequently return to using amphetamines partly as a way of dealing with these withdrawal symptoms, even after their craving for the drug is gone.

Treatment

The road to recovery in methamphetamine abuse, as with any psychoactive substance, is a long and treacherous one. Initial efforts focus on gathering information and treating acute symptoms, especially psychosis and cravings, as well as acute medical conditions brought on by methamphetamine use. As the patient progresses through the various stages of recovery, increasing emphasis is placed on social and behavioral interventions.

The first 4 to 6 days after the patient's most recent methamphetamine use represent the detoxification period. This may be undergone as an inpatient if the patient is significantly toxic. Early in this interval, it is essential that a full medical workup be performed, as many of the acute effects of amphetamines are potentially lethal. Vital signs should be checked frequently, and blood pressure controlled to prevent end-organ damage. Initially, an EKG should be obtained on all patients with signs of toxicity; such patients may also need to be placed on seizure precautions.

If the patient is acutely suicidal, homicidal, or floridly psychotic, he or she may require admission to a locked psychiatric ward. In patients with significant agitation or current psychotic features, risperidone, 1 mg orally, or haloperidol, 1-2 mg intramuscularly, may be given every 12 hours as needed. If drug craving is the major problem, as evidenced by hypothermia and subjective reports from the patient, low-dose amantadine or bromocriptine may be tried, although these can bring out or aggravate psychotic features. Conversely, neuroleptics can induce increased drug craving. A less effective, but often better-tolerated treatment for craving is to replenish amino acids needed in the synthesis of neurotransmitters depleted by chronic stimulant use; these are marketed as combination preparations such as Tropamine and Renew.[15] Acute abstinence-induced depression can sometimes be aborted by any of the tricyclic or seratonin-specific antidepressants, the latter being preferred for their relative lack of cardiac effects.

After the first week or so, the patient has largely recovered from the physiologic part of the addiction, and nonmedical interventions become foremost in importance to combat the psychological addiction, which is often much more problematic. These interventions may include daily twelve-step meetings, changing one's life-style to eliminate contact with friends who use, and making specific goals and commitments to maintain abstinence. By this stage, success is largely in the hands of the patient, and many patients relapse and start the process over many times before achieving a sustained recovery.

Conclusions

The Hawaiian epidemic of smokable crystal methamphetamine represents a serious public health and public safety threat. It remains to be seen whether this represents cultural and socioeconomic conditions unique to Hawaii, or whether this is merely the first outbreak of a national pandemic. Some signs point to the latter, including recent increases in use of smokable methamphetamine in West Coast cities.[16] It will be extremely important to monitor usage patterns in Hawaii and on the Mainland in order to help formulate effective public health and law enforcement policies.

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Continued on Page 44

A Case Report of Extensive Vitiligo

Tien-Ahn Wee MD, Medical Resident
Department of Medicine, University of Hawaii

This is a case presentation and discussion of extensive vitiligo in a 44-year-old woman who was treated with monobenzone who had previously failed repigmentation therapy with psoralen-ultraviolet A therapy.

Case Report

The patient is a 44-year-old woman of Portuguese descent who first started experiencing depigmentation of her skin at age 14. The patient was treated with oral psoralen-UltraViolet-A(PUVA) treatment for 2 years with partial repigmentation of the affected areas. Additional therapy was performed intermittently between the ages of 23 to 25 years with limited response. Due to pregnancy, the patient discontinued treatment when she was 26. During this time her vitiligo continued to worsen. Two years after her pregnancy the patient began to experience a rapid progression of her vitiligo. The patient was then evaluated for further PUVA therapy. On examination it was noted that her vitiligo was extensive, involving more than 60% of her body. This included highly visible areas around her eyes, cheeks and mouth, in addition to her body and extremities. Furthermore, the patient reported that sites of old repigmentation were irregular and hyperpigmented even 15 years after initial treatment. The patient reported her condition caused her severe emotional distress. In light of the unsatisfactory results to her prior repigmentation therapy and the extensive areas of involvement, the patient desired depigmentation therapy. Of note is the absence of any family history of vitiligo or autoimmune disorders.

The patient was photographed for documentation and then started on 20% monobenzone cream with frequent follow up examinations for progression of her therapy. The patient received 3 years of treatment with highly satisfactory results and no side effects. However, soon after termination of monobenzone treatment, the patient noticed some repigmentation on her arms after sun exposure. This progressed to involve areas on her chest and face. Unfortunately soon after this, the pharmaceutical manufacturer stopped supplying monobenzone and no further supplies have been available in America. The patient was then treated with hydroquinone without satisfactory response. Numerous attempts have been made to find alternative sources of monobenzone. So far this has been unsuccessful.

Discussion

Definition

"Vitiligo is a disease of unknown origin which causes destruction of melanocytes in the skin, mucous membranes, the eyes, and occasionally in hairbulbs and in the ears. The loss of melanocytes alters both structure and function of these organs."[1]

Incidence

Vitiligo affects between 0.066% to 8% of Americans.[2-4] It occurs in all ethic groups and equally in males and females. Vitiligo tends to be more noticeable in darker skinned ethnic groups. However, there is no evidence to conclude that the incidence is any greater in darker skinned people. Of additional interest is the age predominance in vitiligo; 25% of patients develop vitiligo before 10 years of age, 50% develop it before 20 years of age and 95% before the age of 40.[1] There is no literature to suggest any significant difference in the incidence of vitiligo in Hawaii compared with the rest of the country.

Pathophysiology

There are three widely accepted theories as to the etiology of vitiligo, however, the precise pathophysiology of vitiligo is still unknown and the subject of current research. The neural theory supports the notion that depigmentation is due to melanocyte destruction or inhibition of melanin production when a chemical mediator is released at the nerve endings. Another theory explains vitiligo as the result of destruction of melanocytes by tyrosine, dopa and 5,6-dihydoxyindole which are all involved with the normal production of melanin. It has been postulated that melanocytes have a protective mechanism against their destruction, however, when this is lost, the result is melanocyte damage and depigmentation. The final theory ascribes vitiligo to an autoimmune dysfunction. Of particular interest is the finding that there is a ten fold increase in vitiligo in patients with autoimmune diseases.[5-13] In addition, studies by Naughton et al., and Gilhar et al., have demonstrated antibodies against melonocytes in vitiligo patients.[7,14]

Differential Diagnosis

There are a number of other conditions of depigmentation that may be confused with vitiligo. Usually a careful physical examination and history is sufficient to distinguish vitiligo from other causes. One of the most common of these is tinea versicolor, i.e., kane in Hawaiian. This can be readily ruled in or out by performing a potassium hydroxide test on skin scrapings and looking for the characteristic fungal hyphae under the microscope. Tinea, if diagnosed, can be readily treated with any number of the antifungals available to the clinician. Scleroderma and morphea can also be readily ruled out by simple palpation of the lesions. Listed below are some additional, conditions that the clinician should be aware of in the differential diagnosis.

Diagnostic Criteria

Clinical Features

The diagnosis of vitiligo is almost exclusively made by examination of the patient. Vitiligo is often first detected by patients when they notice areas of depigmentation contrasting with normal darker areas of their skin. In addition, hypopigmentation may also be present. These patterns generally have well demarcated borders. Commonly affected areas are the hands and body openings such as the eyes, nostrils, mouth, nipples, umbilicus and genitalia. These areas of vitiligo are usually bilateral and symmetrical. However, the converse is also observed and any part of the body may be affected. Other areas affected that have been reported are previous sites of trauma and scarring.[9,14] In particularly fair skinned patients(type I/

Table 1.—Differential Diagnosis
1. Discoid lupus Erythematosus
2. Idiopathic guttate hypomelanosis
3. Lichen sclerosus et atrophicus
4. Morphea
5. Nevus anemicus
6. Piebladism
7. Pityriasis alba
8. Woolf's syndrome
9. Tinea versicolor
10. Turberous sclerosis
11. Scleroderma
12. Waardenburg's syndrome
13. Ziprkowski-Margois syndrome
14. Leukoderma
15. Hanson's disease
16. Mycosis Fungoides

Table 2.—Repigmentation Therapies
Medical
1. Topical psoralen photochemotherapy
2. Oral psoralen photochemotherapy
3. Topical steroid therapy
4. Oral steroid therapy
5. Intralesional therapy
6. Cosmetics
7. Khellin and UVA
8. L-Phenylalanine and UVA
9. Immune modulators(cyclosporine, Anapsos, Isoprinosine)
Surgical
1. Dermabrasion and topical 5-FU.
2. Autologous epidermal grafts.
3. Tattooing
4. Autologous melanocyte transplants.

Table 3.—Depigmentation Therapy
Medical
1. Monobenzylether of hydroquinone

II) who may not have greatly contrasting areas of depigmentation, a Wood's lamp may prove helpful in assessing the involved areas. While the diagnosis of vitiligo can generally be made by the history and physical examination, further diagnostic tests may be helpful in differentiated this condition from other disorders that are similar in presentation. In addition, associated disorders such as thyroid disorders, pernicious anemia, diabetes, or Addison's disease may be also detected by additional diagnostic tests.

A biopsy may be helpful in differentiating vitiligo and other similarly presenting diseases — the histological features of vitiligo are discussed in the next section. However, most patients do not require a biopsy.[1] Thyroid function tests may be helpful in ruling out an associated thyroid disorder. Further tests include antiparietal cell, antithyroid(thyroglobulin and microsomal), and antinuclear antibodies to rule out commonly associated autoimmune disorders.

Histology

In early vitiligo the only abnormality may be a decrease in the number of melanocytes. In late stages there is a complete absence of melanocytes. Additional features may be basilar vacuolopathy, exocytosis of lymphocytes, spongiosis, and lymphohistiocytic infiltrates.[1,14-16] However, often times these are not observed.

Current Treatment Modalities

There are two major ways to treat this disfiguring ailment. The more preferable and widely used therapy is repigmentation. An alternative in extensive vitiligo (>50%) or vitiligo that has failed repigmentation therapy is depigmentation of the remaining melanocytes.[1,9,15] These various methods have been well described in numerous articles. In addition, on going research holds the promise of additional treatment therapies.[1,16,18,19]

Repigmentation Therapy

This can be done by a variety of methods. However, the most widely used and successful is PUVA(Psoralen UltraViolet A) therapy.[1,16] The precise mechanism of action of psoralen is unknown. However, PUVA therapy has been observed to result in melanocyte hypertrophy and proliferation in the residual follicular melanocytes in the vitiliginous areas. Furthermore, melanocytes in pigmented areas surrounding these lesions undergo similar changes. This results in repigmentation when these stimulated melanocytes migrate to the depigmented areas. Treatment may require up to 18 months and more than a hundred visits.[9,16] This requires considerable patient motivation. However, 16-24 treatments will usually produce some new pigmentation.[16] Suitability of this treatment is based on the patients motivation, concern for appearance, race, age, and access to phototherapy facilities. In addition, eye disease, skin cancer, lupus erythematosus, hepatic and cardiovascular diseases are also screened for in the evaluation of appropriateness of PUVA therapy for the patient. In general topical PUVA is used in patients with less than 20% involvement of their skin. For patients with more than 20% involvement, resistant to topical PUVA or children younger than 10 years old, oral PUVA is used instead.[1,9,16] A common side effect of both topical and oral PUVA is photosensitivity. Severe blistering may occur with sun exposure and the patient must ensure adequate protection with a broad spectrum(UVA and UVB) sunscreen. With good patient motivation and compliance PUVA can produce excellent results with a minimum of side effects. The long term effects of PUVA are excellent and the vast majority of patients are able to avoid additional therapy.[15] Artificial sources of UVA are generally more preferable over natural sunlight. UVA machines have better reliability and consistency compared with natural sunlight UVA which varies according to atmospheric conditions, the season, time of day and various other factors. In addition, the risk of overexposure and toxic side effects are greater with natural sunlight UVA. Topical PUVA is a contraindication for natural sunlight PUVA.[1] PUVA therapy is not indicated for children under 2 years of age. Unfortunately, despite generally good results, some patients are resistant to PUVA. Another therapy option is steroids. Topical, intralesional, and oral steroids all have been used with partial to complete repigmentation ranging between 10% and 82%.[16] Topical steroids are usually considered for the initial treatment of vitiligo. They are also useful in the treatment of children less than 2 years old. Low potency steroids are used in younger children whereas mid to high potency steroids are used in older children and adults.[16] Results may take several weeks to appear and side effects of the treatment include atrophy, striae, and telangiectasias. Moreover, the risk of immunosuppression and infection is a concern with steroid therapy. In patients who are resistent to repigmentation or



Fig 1.—Pretreatment with monobenzone: This demonstrates extensive depigmentation of the arms, chest and neck.



Fig 2.—Pretreatment with monobenzone: This shows extensive involvement of the anterior surfaces of the lower extremities.



Fig 3.—Pretreatment with monobenzone: This shows extensive involvement of the posterior surfaces of the lower extremities.



Fig 4.—Pretreatment with monobenzone: This shows the results of depigmentation with monobenzone to the neck.



Fig 5.—Post-treatment with monobenzone: This demonstrates the results of depigmentation of the right arm following treatment.



Fig 6.—Post-treatment with monobenzone: This demonstrates the results of depigmentation of the left arm following treatment.

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Fig 7.—Post-treatment with monobenzone: This demonstrates the results of depigmentation of the lower extremities (anterior surface).



Fig 8.—Repigmentation: This photograph demonstrates spontaneous repigmentation of the arms following cessation of monobenzone therapy.



Fig 9.—Repigmentation: This photograph shows several small areas of repigmentation to the anterior surfaces of the lower extremities following cessation of monobenzone therapy.

with such extensive lesions that neither PUVA nor the other repigmentation therapies are appropriate, depigmentation of their remaining melanocytes is another option.

Depigmentation Therapy

This is the treatment of choice in patients resistance to repigmentation or with extensive(greater than 50% involvement of skin) vitiligo. The only recommended treatment in depigmentation therapy that has been shown to work effectively and produce cosmetically acceptable results is monobenzone.[1,9,16] Treatment is usually started with 10% monobenzone twice a day. However, therapy should be tailored to the individual patient. After 2 to 3 months the concentration is increased to 20% if no irritation occurs. Initially the face and upper arms are treated first to limit systemic effects. This is followed by application to the other affected areas. Depending on the patient's reaction to the treatment this may take up to 2 or 3 years. After treatment is complete the patient is completely depigmented and must take precautions against sun exposure. Dermatitis and pruritus are the most commonly reported side effects. However, they can be effectively controlled with corticosteroids. In addition, serosis, alopecia, premature graying, and ocular changes have also been reported in some patients.[16] While it is important to note that this treatment is generally considered to be permanent, repigmentation can occur. Additional applications of monobenzone to the repigmented areas are usually sufficient to remove them.

Conclusion

For extensive vitiligo(involving more than 50% of the patient's body) or vitiligo unresponsive to repigmentation therapies, depigmentation provides an excellent alternative treatment.[9,16] The side effects are easily controlled and the results can be highly satisfactory. Unfortunately, the only effective medication, monobenzone, is no longer available in the United States. Reintroduction of this drug to help this selective group of vitiligo patients would be highly desirable.

Addendum

Shortly after submission of this manuscript there was news that 20% benoquim(monbenezone) might soon be reintroduced to the American market.

Credits

Special thanks to Dr Norman Goldstein for his assistance.

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Life in these parts

Everyday is a Nice Day!

While my wife and I were vacationing in Hawaii, we went to see the USS Arizona Memorial, but got lost and ended up at a gate manned by a young marine. After he gave me directions to the memorial, I thanked him and said, "Have a nice day."

As I was about to leave he said, "Sir, I'm 20 years old, single and stationed in Hawaii. Every day is a nice day."

Michael Crain Humor in Uniform
Reader's Digest Jan '97

Personal Glimpses

We had only recently noticed that one of our favorite cardiologists, **Ed Chesne** no longer presented with a cigarette dangling from his lower lip, "Don't you smoke anymore?" he teased.

"Gave it up 20 years ago. It must still be in your computer." he replied.

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May 21, '96

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Sportsmen

Of Doctors and Fast Cars

"Actually there are some similarities. When you drive a race car, your concentration has to be absolute. You cannot allow yourself to be distracted. It's the same thing in the operating room when you're doing surgery. Because racing requires so much concentration—it sounds strange, but—it is very refreshing. When you jump out of the car at the end of a ride, you feel exhilarated. You can get that feeling at the end of a surgical case. There is the same kind of reward." Quotes from an interview with Honolulu Urologist **Tom Ito** who races his Formula Ford in five or six races a year and incidently owns three franchise Jiffy Lube stores in town)

(Pacific Business News March 4, 1996. Interview by Andrew Gomes)

The Grandfather

After delivering more than 10,000 babies, it's inevitable that Hawaii's "grandfather of obstetrics"/(81-year-old **Colin Craig McCorriston**) would run into someone he knows at the grocery store. Colin confesses. "I spend 50% of my time shopping and 50% yakking with old patients." "Colin is not only an OB/GYN, he's a complete physician," says one of his former students, **Ralph Hale**, executive director of the American College of OB/GYN and the U.S. Olympic Committee vice president. "He's the type of physician all of us strive to emulate." When Hale was at UH and McCorriston had just retired from Straub after 41 years, Hale recruited him to teach. So that is what Colin still does as an associate professor of OB/GYN. He meets with students and residents four mornings a week at Kapiolani.

"The way to keep going is to keep using your brain and exercise."

McCorriston cites dramatic changes in medical practice and education because of managed care. "As primary care doctors, obstetricians and gynecologists are required to deal with sore throats, headaches, sprained ankles and all kinds of things we weren't really taking care of before. Unfortunately, HMO's look to nothing but the bottom line, black and white and dollars and they're not looking at quality care. There is more and more paper work. It takes away from patient care."

(Excerpts from Star-Bulletin writer Helen Altonn's articles)

The Godfather

Calvin C.J. Sia "Godfather of Hawaii's Children"

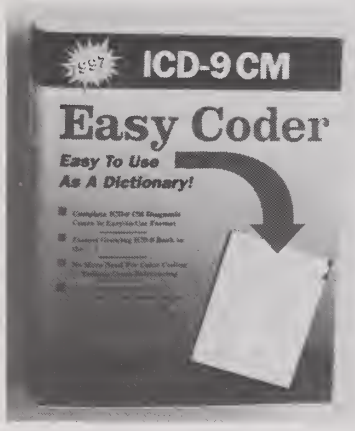
As a kid growing up his first 12 years in China, he saw poverty, devastation, bodies floating in rivers and his father saving lives with an iron lung. "The imprints were significant," said Calvin C.J. Sia, a 69-year-old pediatrician who has pioneered for nearly 40 years to turn those imprints into healthier lives for children and families. The Godfather of Hawaii's Children has co-founded the Hawaii Family Stress Center, Hawaii Healthy Start, the Medical Home concept, Zero to Three program and Healthy and Ready to Learn Center. He also created the Variety School for learning disability children.

He recently received the Jonas Salk Memorial Award; he is a chairman of the Advisory Commission on Childhood Vaccine for Health and Human Services. He has embarked on a Carnegie Foundation mission to create an integrated family health care system, which Cal feels may be his best achievement.

At Punahou, Cal won the American Legion Boy of the Year for sports and academics and popularity. After army service, Cal attended Dartmouth College on the GI Bill and met his wife and strongest supporter, Kathy, on a blind date. They married over the protests of her Hong Kong family. They have three sons.

Cal sums up his life achievements with: **"The exciting part is one pediatrician can affect the lives of many."**

Cal's pediatric nurse since 1959, Lorraine Yuen best summarizes his personality: "He's a good organizer. He was just able to divide himself up into little pieces wherever he was needed. He really is a gem. When he is angry, the most he does is, he has a big smile on his face, he pounds



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on the table and says, "I'm so mad." Patients kept returning because he has this magnetism. Somehow people just believe all he has to do is touch their child and the child will get well."

(more excerpts from Helen Altonn's superb articles)

Medical Tidbits

A study of 28,271 women age 30 and older who had mammograms between 1985 and 1992 indicates that breast density does not affect the accuracy of mammograms.

"The problem is that in women under 50, breast cancer is not very amenable to screening because its such a fast growing disease. It is unclear why tumors grow more rapidly in younger women. They are probably linked to premenopausal hormones," says the study's lead author **Karla Kerlikowske,** associate director of San Francisco VA Medical Center's Women Veterans Comprehensive Health Center. The researchers recommend screening mammograms every one or two years for women over 50 and every year for younger women.

The National Cancer Institute says there is not enough evidence to justify mammograms every one to two years before age 50, but plans to review that decision.

Geckos a Source of Salmonella

Richard Vogt, state epidemiologist says Salmonella has been found in turtles, iguanas and other reptiles, and has also been cultured from geckos.

(from Checkup on Health by Wes Young)

Boogie Board Benefits Lower Back Problems

Swimming is still one of the best exercises for back problems. If you don't like swimming, then perhaps you should try boogie boarding.

(Dr Fitness by Chet Nierenberg)

Honolulu Heart Program Studies

A *JAMA* article (written by lead author **Lenore Launer**, neuro-epidemiologist and co-written by researchers at the University of Hawaii and the U.S. National Institute on Aging) reports that Japanese American men who had high systolic pressures in mid-life were 2-1/2 times more likely to have poor cognitive function in old age then men with low systolic pressures. For every 10 point increase in systolic BP, there is a 9% increase in risk of poor cognitive function. The study involved 3,735 Japanese American men who were enrolled in a heart study in the 1960's and studied through the early 1990's. Co-author **Kamal Masaki** says brain scans performed on the patients since the study was written indicate that many suffered silent strokes. The study did not explore whether high blood pressure has any role in dementia such as Alzheimer's.

In September **Lon White**, director of the Honolulu-Asia Aging Study reports that Japanese-American men in the Honolulu Heart Program (started in 1965 on 8,000 Japanese-American men born between 1900 and 1919) have a higher rate of Alzheimer's than men in Japan.

In October, Honolulu epidemiologist **Dr Boji Huang** reported in the American Journal of Epidemiology that Japanese-American men in Hawaii who tended to retain a more Japanese life-style (ie. low fat Japanese diet viz rice, tofu and fish) have lower diabetes rates. About 70% of the 500 Japanese-American diabetics had never lived in Japan and had higher fat intake, exercised less and were more obese.

Miscellany

A missionary, a salesman, and an engineer were sentenced to death by guillotine for various misdeeds. First up was the missionary. He wanted to die looking up toward heaven, still seeking forgiveness from God. With head in position, the lever was released. The shiny blade came down with a swish. But suddenly, it stopped half way and he was spared.

The salesman had witnessed the miracle of the faulty guillotine blade. He too elected to look up and pray for heavenly intervention. Again, the lever was released. The blade came swishing down and again stopped halfway. And he was spared.

The engineer was last. He had watched the two miracles and he too elected the face up position. As he was being prepared, he looked up at the guillotine rack with his engineering perspective and yelled suddenly, "Wait! I see what the problem is!"

(As told by Walter Young)

A man was celebrating his 100th birthday. His family and friends had ordered a special birthday cake, from whence a scantly clad luscious blond popped out. She whispered into his better ear, "I'm here to give you super sex." He whispered back, "I'll take the soup."

(Another Walter Young contribution)

Did you hear about the insomniac dyslexic agnostic? He stayed up all night wondering if there really was a dog.

(Contributed by Daniel Klaiman
Gleaned from Reader's Digest Oct. '96)

A man confided to his wife that he was having short-term memory problems. Then he read an article about a doctor who treated such cases.

"I have that problem, too," said his wife.

"Lets go together."

Several weeks later the man was telling a friend about the doctor's program and how well it worked.

"I'd like to see that doctor, too," said the friend. "What's his name?"

"Help me with this," said the man.

"I need the name of a flower. It has a long stem and has thorns."

"Rose?" said the friend.

"Yes, that's it!" said the man.

"Hey, Rose! What's the name of that doctor we go to?"

The Jokesmith

Clothes Encounter

When a woman goes to her closet and says, "I don't have anything to wear," she really means "I don't have anything NEW to wear." When a man goes to his closet and says, "I don't have anything to wear," what he really means is "I don't have anything CLEAN to wear."

A Wife's Little Instruction Book (Avon)

All in a Day's Work

The five phone lines at our busy eye doctor's office were ringing at once. A receptionist picked up a line on hold and told the patient, "Take it out, rinse it and put it back in." Her advice, however, was met with dead silence. Then my co-worker realized that she was talking not to a contact lens patient, but to a person suffering from a bloodshot eye. Finally the patient mustered a response, "I think I'll get another opinion," she said.

(Reader's Digest Nov. 1996)

The kindergarten teacher was showing the class an encyclopedia page picturing several national flags. She pointed to the American flag and asked, "What flag is this?"

A little girl called out, "That's the flag of our country."

"Very good," the teacher said, "And what is the name of our country?"

"Tis of thee," the girl replied confidently.

The kindergarten teacher had just finished a science demonstration on magnets. As usual she wrapped up the lesson by asking the kids to summarize what she'd explained. "My name begins with 'M' and I pick things up," she said, "What am I?"

"A mother," was the instant reply from several kids.

How lazy is he? Well, I've seen him step into a revolving door and wait.

Analyst: So you have trouble making up your mind?

Patient: Well, yes and no.

"My doctor tells me I can't play golf."

"So he's played with you too, eh?"

Potpourri

Two nuns were riding their bicycles down an old Paris street when one remarked, "I've never come this way before." "Maybe," the other nun suggested, "it's the cobble stones."

On a beautiful sunny Saturday afternoon, Kurt stood on the first tee of his country club. He had just pulled out his driver when a young woman in a wedding gown came running up to him. "You bastard!" she screamed. "You stinking no-good bastard!"

"What's the problem?" he asked, "I told you, only if it rains."

Playboy June '95

20/20 Blindness (condensed version)

As a medical student, I was assigned to a small farming community where I spent two months as a requirement. One day a local farmer came in for an annual check up. The doctor asked me to do a general history and physical. When I got to the visual acuity test, I stood the patient 20 feet from the eye chart. I asked him to cover his right eye first and he read the letters perfectly. Then I asked him to do the same for the left eye and again he read it perfectly. I then said, "Now both." There was a silence. He couldn't even read the large E at

Continued on Next Page

the top. I turned to discover he was covering both eyes.

Richard Klein, Toronto Stitches
September '96

Quotable Quotes

"I feel that if I stop working I'll get old. My father, **Dr Sidney Kirby**, used to say that when he was still working in his 80's. (Mid Pac CC "Rub of the Green" member profile Claire Simpson quote). (Sidney Kirby was medical director at Kalaupapa in the 1950's and died in 1981 when he was 96-years-old).

"When a man sits with a pretty girl for an hour, it seems like a minute. But let him sit on a hot stove for a minute—and it's longer than any hour. That's relativity." *Albert Einstein*
(Gleaned from the Medical Arts Press Newsletter Sept/Oct 96)

"If you want to recapture your youth, just cut off his allowance." *Al Bernstein*

"Music washes away from the soul the dust of everyday living." *Leopold Stokowski*

"The best executive is the one who has sense enough to pick good men to do what he wants done, and self restraint enough to keep from meddling with them while they do it."
Theodore Roosevelt

"Which pharmaceuticals company will find a sure cure for impotence?" asks comic Paul Ryan.

"Speaking for joke writers everywhere, I hope it's Upjohn."
Quoted in Los Angeles Times

A candidate came home late one night and gave his wife the glorious news.
"Darling, I've been elected!"
"Honestly?" she replied exuberantly.
"Hey," he said, "why bring that up?"
Contributed by Cathryn Hopkins

Overheard: "The trouble with getting to work on time is that it makes the day so long."
Edgar Argo in National Enquirer

"Youth is a wonderful thing. What a crime to waste it on children."
George Bernard Shaw

Points to Ponder

Young writers often suppose that style is a garnish for the meat of prose, a sauce by which a dull dish is made palatable. Style has no such separate entity; it is nondetachable, unfilterable. The beginner should approach style warily, realizing that it is himself he is approaching, no other; and he should begin by turning resolutely away from all devices that are popularly believed to indicate style—all mannerisms, tricks, adornments. **The approach to style is by way of plainness, simplicity, orderliness, and sincerity.**

E.B. White "Elements of Style"

Sketches from Stitches

What Can You Say?

Recently one of my well known middle aged female patients presented urgently to the office.
"I have a headache," she said, "but I don't know what it is because there isn't much in there to hurt."
Marie Cescon MD, Woodville Ont.

High Tech Exam

John, yet in his 30's was concerned about prostate cancer. His father was found to have the condition and he had spent hours in a urologist's office reading pamphlets on prostate cancer and its prevention.
"I'm sorry," he said, "but could you tell me what tests I need to check for prostate cancer."
"A blood test and a rectal exam," I repeated.
"OK, OK, But if I'm really at risk, I don't want just **any** rectal exam. I want one of those new **digital** ones"
I.W. Tobson MD, White Rock, B.C.

Methamphetamine Abuse: An Overview for Health Care Professionals

Continued from Page 36

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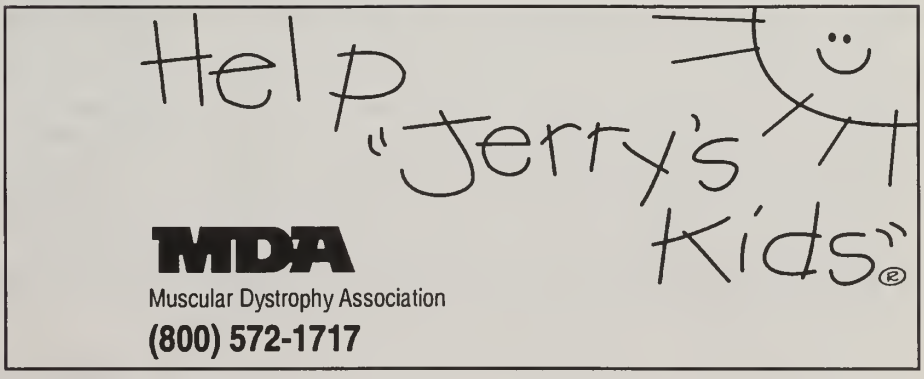
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The Weathervane

Russell T. Stodd MD

Virtue has never been as respectable as money.

In the Congressional arena of Medicare reform, who brings the most gold in their PAC? Not the senior citizens' lobby, but doctors and health insurers. From July '85 to June '95, the AMA spent $13.7 million, and in second place among doctors is the American Academy of Ophthalmology with $3.63 million. Considering what HCFA has done to ophthalmologists in the past 10 years, one might ask if eye surgeons got their moneys worth.

"DNR" Means—Do not Respect! Whatever plan one makes there is a hidden difficulty somewhere.

An 80-year-old man had his doctor write on his chart that he did not want extraordinary life-saving measures. When his heart slipped into a potentially fatal rhythm, a nurse revived him with a defibrillator. He suffered a paralytic stroke and remained incapacitated for two years before his death. His family sued the hospital to recover the $100,000 expense incurred in the two months of hospitalization after the stroke. The medical bills consumed all but $15,000 of his net worth before he qualified for Medicare and Medicaid. The state's highest court ruled 4-3 to over turn a lower court's ruling against the hospital, as the Chief Justice said "not every wrong is deserving of a legal remedy." A dissenting justice stated, "He did not wish to be subjected to certain medical treatment. Nevertheless, his instructions were not followed." As the family's attorney said, "the right to refuse is a joke."

Every organization has an allotted number of positions to be filled by misfits. Once a misfit leaves, another will be recruited.

Like the legendary rodents deserting the floundering vessel, President Clinton's cabinet members are departing for greener (safer?) pastures. Latest to depart is David A. Kessler, MD. Commissioner of the Food and Drug Administration. A President Bush appointee, Kessler stayed on under Clinton and has been a strong advocate for tobacco control. Before he arrived, the FDA was under a cloud for being ponderously slow in drug-approval, and was alleged to have accepted drug industry payoffs. Kessler cleaned up the image, established MEDWatch, a program for reporting adverse events involving previously approved drugs and devices, and shortened approval times for new drugs for life-threatening conditions. His high profile drew criticism as well as praise, and some claim he is a political opportunist who used the agency to further his own goals. On balance, he has been a worthy public servant in an administration not noted for honesty and integrity.

Left to themselves, all things go from bad to worse.

Does a telephone conversation create a doctor-patient relationship even if no bill is charged? Yes, free treatment is still treatment, as when a dentist and social friend, called an internist complaining of back pain, difficulty breathing and sweating. The internist instructed the patient to come to his office or the hospital immediately. The dentist continued to see patients for several hours, then went to the doctor's office where he went into cardiac arrest, and subsequently died. The family sued the doctor, but the appellate court ruled that since the patient had failed to follow the doctor's instructions, a doctor-patient relationship had not been established.

Read the newspaper avidly. It is our abiding form of continuous fiction.

In September 1994, Heather Whitestone was chosen Miss America, the first ever with a disability, loss of hearing. The Atlanta Constitution printed a story in the front section stating, "At age 18 months, she almost died from a adverse reaction to a routine DPT vaccination." The following day the New York Times ran an Associated Press story, "Miss Whitestone lost her hearing at 18 months because of an adverse reaction to a diphtheria-tetanus shot." But a week later, the New York Times ran a different story relating that Miss America's deafness in fact resulted from a Hemophilus influenza type B meningitis, an infection which can now be prevented by vaccination. The question is, why can't the media get it right instead of rushing for the sensational? Obviously, the effect on public health can be enormous with a scare headline about vaccination. In fact, a correction story is rarely startling, and it is usually found in section B, page 12, near the bottom of the page. Journalists have a duty to report what is accurate, but hey, why not grab a headline and do an investigation later? Malnewsance? Disnewsia? Malreportage? Whatever—they should be held accountable.

The death of junk science—and the death of medical prostitutes.

In Portland, Oregon, a US District Judge gathered a panel of experts for advice, to evaluate claims for injuries due to silicone breast implants. He barred testimony of plaintiffs' experts, and instead relied upon the panel, which stated that there is insufficient scientific evidence to prove the implants cause disease. It marks the scientific evidence to prove the implants cause disease. It marks the first time a judge has made a ruling based upon a panel of scientific experts he gathered for advice. Several other judges are impaneling similar groups. What this means is that the unscrupulous medical-legal "whores" may be forced to make an honest living instead of peddling their concocted testimony to the highest bidder.

Yes, Virginia, There is a CD-ROM.

In the days before cyberspace, children wrote letters to Santa Claus, and while they often were effective, Santa did not answer the letters. Now, thanks to World Wide Web, a chat room was set up by a Texas software maker. Kids go directly to the digital North Pole with questions like "Hoe old are you, dude?" and "I've been good. Can you give me $1,000,000?" A 15-year-old girl wanted a nice boyfriend, and Santa replied, "I can't actually bring you a boy, that would be kidnapping. We used to do that in the 12th century, but we got in trouble." Yet, some of us can recall when sigh-brr-space was body parts away from the fire, and whatever happened to the one-horse open sleigh?

Addenda

- Percentage of women in their 20s who live with their parents, 35%, male counterparts who do, 45%.
- The difference between a tax collector and taxidermist—the taxidermist leaves the hide.

Aloha, and keep the faith.....rts

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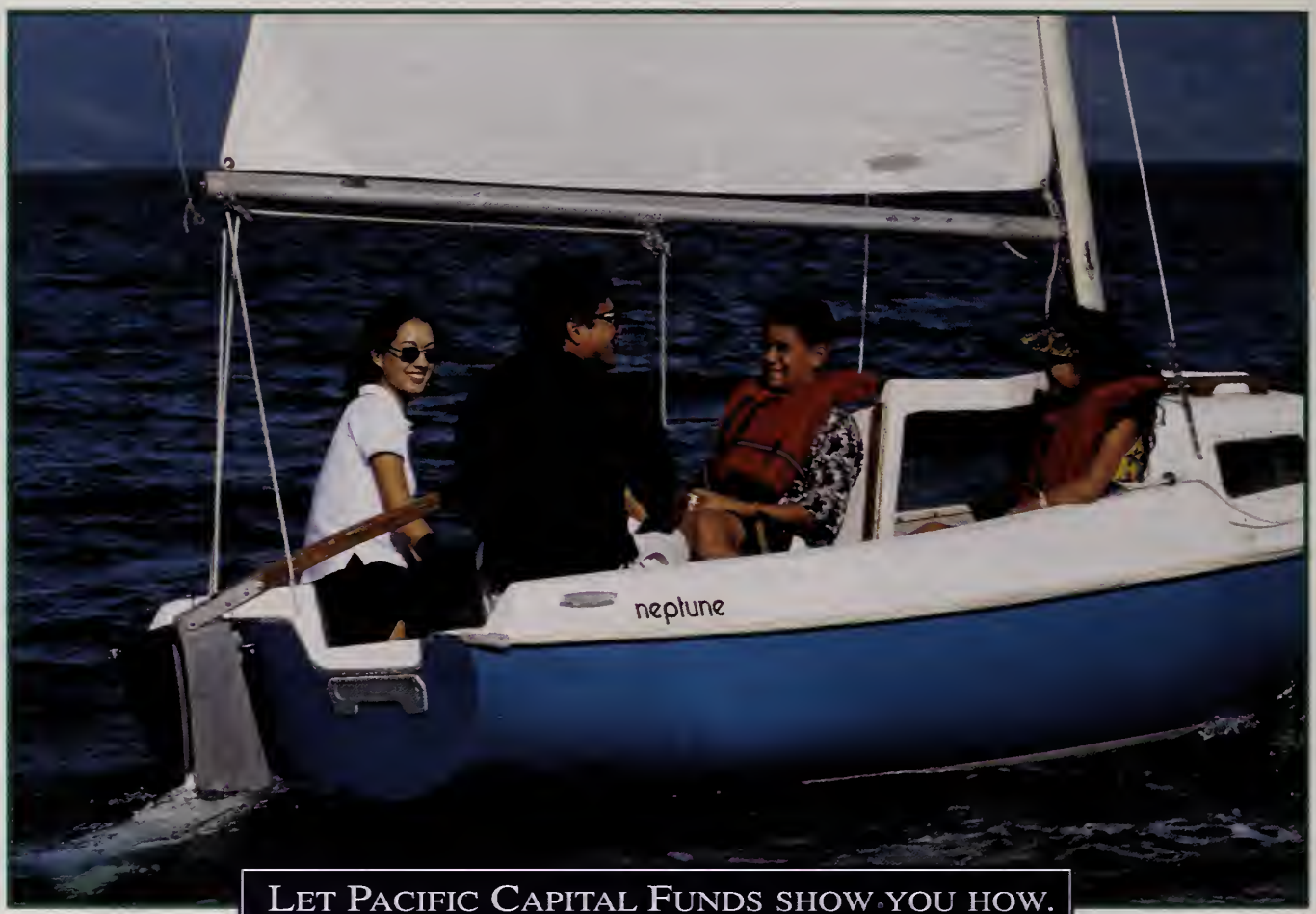
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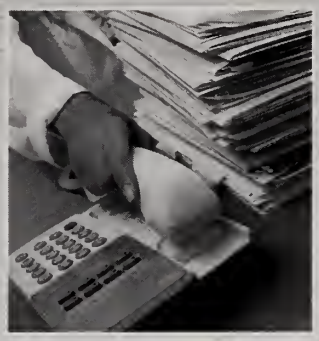


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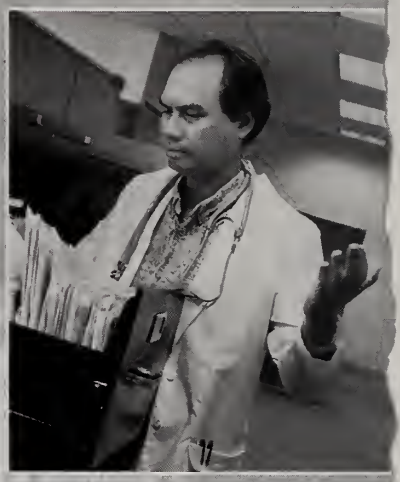
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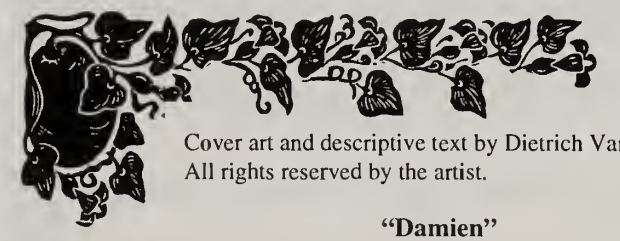
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"Damien"

Father Damien, a Belgian priest, lived with the Leprosy patients at their isolated colony at *Kalaupapa* on the island of *Molokai*. His mission was to mend their sores as well as thir souls. Inevitably he died of Leprosy and has since been beatified. He is now a candidate for canonization.

Hawaii Medical Journal Forms Foundation

The Hawaii Medical Foundation Fund. HMA Community Research Bureau 501 (c) (3), has been established to support the *Hawaii Medical Journal*. All contributions are tax deductible. If you would like to support the Hawaii Medical Journal, please send contributions to the Hawaii Medical Association, 1360 S. Beretania Street, Second Floor, Honolulu, HI 96814. Please make your check payable to the *Hawaii Medical Journal*. Thank you for your continued support.

Editorial

D.A.D.D. - Doctor Assisted Death with Dignity

Norman Goldstein MD, F.A.C.P.
Clinical Professor, Medicine (Dermatology)
John A. Burns School of Medicine
University of Hawaii

If the cover of this issue looks familiar, it should. We used it for the December '96 Special Issue on **Death and Dying**. No we're not running out of art by talented Big Island artist Dietrich Varez. (He has already supplied us with original Hawaiian prints for use on the 1997 Journal covers.) We're reusing his artwork "Damien" for a second time, because the response to our December Special Issue continues to be overwhelming. So, we're advancing the discussion in this month's Journal, **Death and Dying, Part II**.

Many terms are associated with the controversial topic of Physician-Aid-Dying: Euthanasia, Assisted-Suicide, Right-to-Die. The debate has been raging for aeons. Perhaps the most appropriate acronym for today is D.A.D.D.-Doctor-Assisted Death with Dignity. Physicians have learned that relatively few individuals actually take their own lives, even among the suffering terminally ill. The real issue for debate is how to provide solace to these patients with assurance that they will not be forced to die alone while experiencing excruciating pain. Though there are physicians who voice opposing views, often making reference to the "slippery slope" concept, respondents to our December Issue were preponderantly in favor of advocating D.A.D.D. as a compassionate course of ethical action.

The Journal continues to welcome Letter to the Editor—pro or con, long or short, even anonymously if you wish, on this subject of the century, Doctor-Assisted Death with Dignity.

The Governor's Blue-Ribbon Panel on Living and Dying with Dignity

Under the leadership of **Hideto Kono**, the State of Hawaii Blue-Ribbon Panel on Living and Dying with Dignity meets monthly to discuss the most critical medical/legal/moral topic confronting the nation today: **Living and Dying with Dignity.** The panel will ultimately present its recommendations to the Governor and our State Legislators. Then, in a future issue, the Journal will publish the consensus of the Panel. For now, I would like to share my three-part "homework assignment" from Panel Chairman Kono, with you.

I. Personal Experiences and Opinions

I am, as you know, an MD specializing in conditions of the skin, but one equally concerned with the welfare of the whole person. I suppose that this overarching level of concern has given my patients the confidence to ask about medical problems unrelated to my postdoctoral specialization. Over the years, an increasing number of elderly patients continue to inquire about any available medications to ease their painful, final phase of life. What's a doctor to do?

When my 86-year-old father moved to Hawaii to live in our home, I had the opportunity to talk with him and care for him every morning, evening and weekend. It was wonderful getting to know him again. Having lost the use of half of his body two decades before as the result of a stroke, he was now confined to bed with very little bodily movement possible. Dad was also consumed with extremely painful, terminal lung and prostate cancer. He repeatedly emphasized that he wanted "no pipes, no tubes, no surgery, no hospital." He just wanted to be pain-free at the end of his life. As a physician, I had no difficulty getting his gerontologist to prescribe a strong, long-lasting pain medication that enabled him to remain conversant, comfortable and content, even on his last day at home. On that day, my children, my wife and I were sitting around his bed "talking story" for several hours. As always, he remained mentally very alert and witty. When the sun began to set, Dad told us that he was beginning to get tired, and suggested that the rest of us go out to a neighboring restaurant to enjoy dinner, so we did. Half an hour later, his caretaker called to say "he went to sleep."

Dad passed away in his own time, naturally, peacefully, pain-free and at home, just as he had hoped that it would be. He was indeed a lucky guy at **88**! And we continue to remember him with the twinkle in his eye.

The discussion of physician-aid-in-dying is **the most** important medical, legal, and moral issue in human history; **more important even than abortion**. Dying is everyone's fu-

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ture. NO matter what the U.S. Supreme Court determines in July, we in Hawaii must be prepared to care for our elders and the terminally ill with compassion and love, allowing them to retain their dignity and following their heartfelt wishes until the end.

II. Expectations

Because of Hawaii's multicultural population, we have a special obligation to be empathetic to all of our people with admiration and respect for their diversity. Understandably, this may be difficult for some.

That's why laws need to be enacted to protect physicians who support their parents' will during the dying portion of life. It is understood that when rational, terminally ill patients have effective pain medication, and the knowledge to self-administer it, only rarely do they choose suicide over living. Just the security of knowing that they have control, to end their agony, is a real blessing for them.

III. Issues to Discuss

A. *The necessary discourse between physicians and clergy to examine all aspects of death with dignity*

The family, as well as the patient, has pain. Family physicians, internists, geriatricians and others should be made more aware of the suffering everyone experiences in end-of-life situations.

B. *The legalization of prescribing **sufficient pain medication to relieve suffering.***

It is inhumane to withhold pain relief from a dying patient, even if the dosage required to do so exceeds the usual and customary amount.

C. *The respect of the **religious and moral wishes of the patient***

When a physician chooses not to adhere to the dying patient's wishes, a referral to another physician is in order.

D. *The dialogue between physicians and family to try to enable the patient's return to a home setting in their final days.*

It's not always practical or possible, but it merits discussion.

E. *The broadening of the Hospice program*

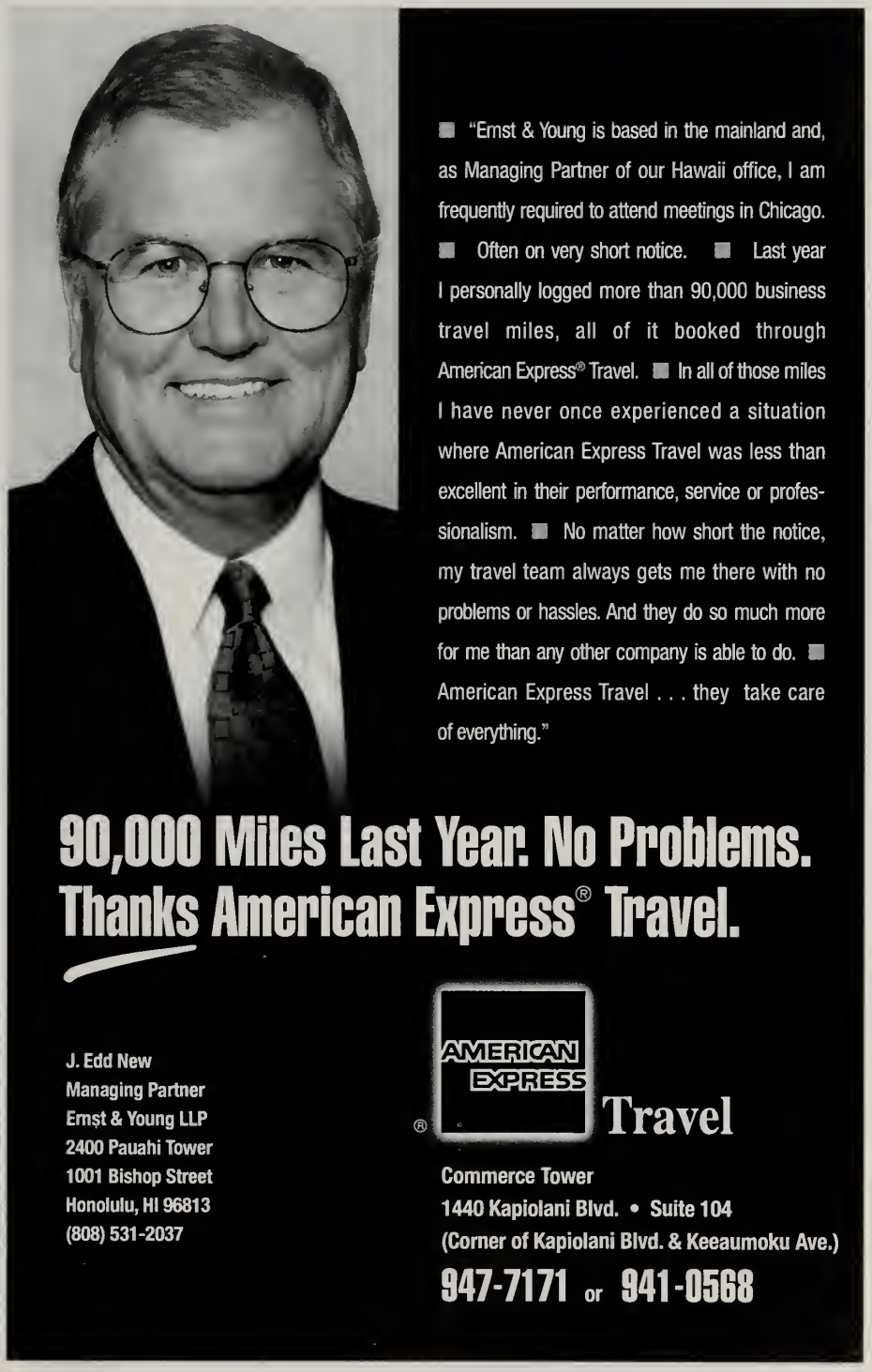
Information about Hospice should be disseminated by the Hawaii Medical Association, the County Medical Societies, through clinics and physicians' offices. The felt need for additional services will carry the cause to the neighbor islands.

F. *The dissemination of additional information about **D.A.D.D. (Doctor-Assisted Death with Dignity)***

Those who request additional information should be put in contact with the local Hemlock Society, which provides educational brochures, books, and video tapes.

G. *The general regard for all cultures and religions in Hawaii*

No matter what the outcome of the June/July 1997 position paper by the U.S. Supreme Court, our leaders in politics, medicine, law and religion must develop ASAP clear and direct recommendations about aiding our aging population. The baby-boomers will be next in line and in need of our comfort and support.





President's Message

John S. Spangler MD

As we approach the House of Delegates meeting in April please help by communicating with the task force committee and reading the information available to you at the medical association.

Please mark your calendar for March 29 for the program planned by the HMA Alliance. This needs your support.

The legislative process continues with close monitoring by HMA and the need for your input into this most important function of the medical society. Many important bills are presented each year which may have a direct impact on your practice. Please help in anyway you can.



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Hawaii Medical Journal

Extra copies of the *Hawaii Medical Journal* September Special issue on Domestic Violence and the December Special issue on Death and Dying are available. For more information please contact the Hawaii Medical Association at (808) 536-7702, or Fax us at (808) 528-2376.

Medical School Hotline

Modifications to the Problem-Based Learning (PBL) Curriculum Increase Opportunities for Learning Basic Sciences

By Leslie Q. Tam, Ph.D.
Director Office Medical Education

Recent trends in medical education across the country include a shift from traditional teacher-centered, lecture-based curricula to student-centered, problem-based curricula. In 1989, the John A. Burns School of Medicine switched to a problem-based learning (PBL) curriculum, and recently it was identified as one of eight medical schools leading reform of medical education in the United States. The PBL curriculum was adopted, in part, because the basic sciences, given traditionally by lecture format in the first two years, was considered excessive and fragmented. In the original PBL curriculum obtained from McMaster University, very few lectures were given. However, the curriculum has been modified each year, based on input from students and faculty. Recent modifications have increased opportunities for students to learn basic sciences in the first two years.

What is Problem-Based Learning? Problem-based learning is an approach in which students learn basic sciences in the context of solving clinical problems. Instead of meeting in large auditoriums to hear faculty give basic science lectures, students meet in small groups of five or six, each with a faculty tutor. Rather than lecture, faculty facilitate inquiry and critical-thinking. Students are urged to discuss uncertainties, think critically, ask questions, and research answers independently. Over the first two years, students investigate about 70 health care problems (HCPs) divided into five curricular units.

Unit 1	Problems in Health and Illness
Unit 2	Respiratory, Cardiovascular, Renal Problems
Unit 3	GI, Endocrine, Hematologic Problems
Unit 4	Musculoskeletal, Brain, Behavioral Problems
Unit 5	Problems in the Ob/Gyn, Pediatric, Adolescent, Geriatric Setting

In Unit 1, for example, students investigate a problem of streptococcal pharyngitis. Students spend the first tutorial reading through the paper problem deciding what they don't know and need to research. These questions are termed learning issues. The group may ask, "What are Streptococci? What is the anatomy and histology of the pharynx? How does inflammation occur? What is the physiology of pain? How does penicillin inhibit bacterial growth? Who is at risk and can preventive measures be initiated in the community? Tutors are given problem guides beforehand and facilitate student inquiry into important areas if the group is unable to proceed. Learning issues are divided among the students, who then spend the next two days researching answers. Students use standard texts, do medline searches, and seek-out resource faculty. After two days of research, they meet together to discuss what was

Continued on Page 56

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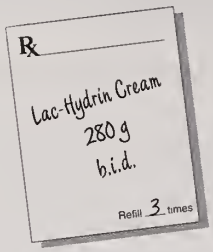
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2. Patients should minimize or avoid use of this product on areas of the skin that may be exposed to natural or artificial sunlight, including the face. If sun exposure is unavoidable, clothing should be worn to protect the skin.
3. This medication may cause stinging or burning when applied to skin with fissures, erosions, or abrasions (for example, after shaving the legs).
4. If the skin condition worsens with treatment, the medication should be promptly discontinued.

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Pregnancy: *Teratogenic effects. Pregnancy Category C.* Animal reproduction studies have not been conducted with Lac-Hydrin Cream. It is also not known whether Lac-Hydrin Cream can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Lac-Hydrin Cream should be given to a pregnant woman only if clearly needed.

Nursing Mothers: Although lactic acid is a normal constituent of blood and tissues, it is not known to what extent this drug affects normal lactic acid levels in human milk. Because many drugs are excreted in human milk, caution should be exercised when Lac-Hydrin Cream is administered to a nursing woman.

Pediatric Use: The safety and effectiveness of Lac-Hydrin Cream have not been established in pediatric patients less than 12 years old. Potential systemic toxicity from percutaneous absorption has not been studied. Because of the increased surface area to body weight ratio in pediatric patients, the systemic burden of lactic acid may be increased.

ADVERSE REACTIONS: In controlled clinical trials of patients with ichthyosis vulgaris, the most frequent adverse reactions in patients treated with Lac-Hydrin Cream were rash (including erythema and irritation) and burning/stinging. Each was reported in approximately 10-15% of patients. In addition, itching was reported in approximately 5% of patients.

In controlled clinical trials of patients with xerosis, the most frequent adverse reactions in patients treated with Lac-Hydrin Cream were transient burning, in about 3% of patients, stinging, dry skin and rash, each reported in approximately 2% of patients.

DOSAGE AND ADMINISTRATION: Apply to the affected areas and rub in thoroughly. Use twice daily or as directed by a physician.

HOW SUPPLIED: Lac-Hydrin Cream is available in cartons of 280 g (2-140 g plastic tubes). Store at controlled room temperature, 15-30°C (59-86°F).

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learned and, synthesize new information, and map learned concepts. The typical week, divided into ten half-days, is shown in Fig. 1 below.

Fig 1.—Typical Week in the PBL Curriculum

	Monday	Tuesday	Wednesday	Thursday	Friday
morning	Tutorial (3 hrs)		Wed a.m. Basic Science Conference & Laboratory	Tutorial (3 hrs)	Noon Colloquia (1.5 hrs)
afternoon		Community Medicine (3 hrs)		Clinical Skills (3 hrs)	Two Electives (4 hrs)

Problem-Based Learning vs Problem-Solving. The terms problem-based learning and problem-solving are often misunderstood. Entering students often feel incorrectly that their task is to "solve the problem" and "manage the patient." However, the task of the student is really to use the clinical problem to learn basic and clinical science, hence the term problem-based learning. In the streptococcal pharyngitis case above, a student might ask, "What antibiotics are used to treat a strep throat?" as a learning issue. However, the tutor may coax students into asking a more rigorous question, "What is the mechanism of action of penicillin on the bacterial cell wall?" or "How does the mechanism of action of beta-lactam differ from other antibiotics?" In a traditional curriculum, such information would be given didactically; however, in the PBL curriculum, the student is challenged to formulate the question in his/her own mind and to independently seek answers in reference texts or by contacting resource faculty. The distinction between problem-based learning vs. problem-solving is important because "front-loading" of information is not required in the former; whereas, it is necessary in the latter.

Increased Basic Sciences. As shown in Fig. 1, the original PBL curriculum had students spending two of ten half-days per week in tutorial. In addition, students spent a half-day each in community medicine and clinical skills, as well as 1.5 hrs in a Friday noon colloquium. The remaining hours were unscheduled to permit independent research. Students were not required to sit in lectures or labs. Based on ongoing student and faculty feedback, however, modifications have been made to the McMaster curriculum, which have increased the opportunities for students to learn basic sciences.

Wednesday Morning Basic Science Conference/Lab. Wednesday morning conferences contain two hrs per week of lectures on basic science topics central to the week's HCP. For example, if the students are studying a problem of reflux esophagitis, the two hours Wednesday morning may be shared by a physiologist lecturing on GI motility and a pharmacologist lecturing on the pharmacology of drugs used to control acid secretion in the stomach. These basic science lectures are followed by 1.5 hours of laboratory experiences, in such disciplines as histology, pathology, and microbiology. Although attendance at Wednesday Morning Conferences is not required, student attendance is regular, and students are examined on content in end-unit assessments.

Gross Anatomy/Clinical Skills Course. In 1994, a gross anatomy/clinical skills course (Biomed 571) was introduced in Unit 1. Health care problems in Unit 1 have been organized on an anatomical theme. Students begin with the pharynx and study a case of streptococcal pharyngitis in the first few weeks. The anatomy and clinical

skills course, therefore, focuses on an introduction to the physical exam and the throat. Students then move to a problem involving the chest, and the gross anatomy and clinical skills follows accordingly. The course was introduce in response to student concerns that course in gross anatomy was essential for every medical student. Student feedback has been very positive, and this successful course in now an integral part of the curriculum.

Two Basic Science Electives Per Week. Students may meet with up to two basic science preceptors per week. Each elective course meets for two hours per week and are enrichment opportunities which expand on Unit themes. They are not independent courses. For example, Unit 2 (12 weeks) deals with respiratory, cardiovascular, and renal HCPs. In the Unit 2 Infectious Disease elective, about 15 students examine infections that are not covered in the "core" HCPs. Students who take the elective are encouraged to share new information with other students. Electives are offered in anatomy, histology, pathology, physiology, pharmacology and biochemistry, microbiology, and immunology, among other subjects. Enrollment in electives generally average about 10-15 students, but in the second year Pathology elective given by Dr. John Hardman, virtually all students enroll. Students may design their own electives, which may touch on any subject, including public health, laboratory science and clinical skills, provided arrangements can be made with faculty.

Basic Science Foundations. Last year, faculty offered a series of "Foundation Lectures" each Friday afternoon in Unit 1. In these lectures, overviews of each basic science discipline were presented. Students were offered a lecture on humoral vs. cell-mediated immunity as part of the immunology foundation series, for example. Student feedback has been mixed, and faculty are now considering ways to improve the foundation series. This is simply the most recent example of how faculty are responding to student feedback in ongoing attempt to improve the curriculum.

Outcomes. In recent years, JABSOM students have scored at or above the national average in the USMLE1. This would suggest that the PBL curriculum at the JABSOM, with the modifications described, is effective. Recently, 1200 tutors in 22 U.S. and Canadian medical schools were evaluated regarding overall attitudes and opinions about PBL2. Respondents rated PBL more positively than traditional methods in areas of student interest and enthusiasm, student reasoning, and preparation for clinical rotations. The two methods were judged to be equally efficient for learning, and traditional methods were judged to be superior for teaching for factual knowledge in the basic sciences. The recent modifications of the JABSOM PBL curriculum are hoped to enhance learning of the basic sciences in the first two curricular years. The curriculum continues to be modified as students and faculty search for the right balance between between lectures and independent study.

The learning of basic science is but one dimension of the PBL curriculum. Faculty will strive to produce physicians who retain the qualities of the lifelong learner, independent thinker, compassionate humanitarian, and modern scientist who can live with the ambiguities demanded in the art of healing.

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Cardiothoracic Surgery at Tripler Army Medical Center

Michael E. Nellstein MD, CDR US Navy
Thomas G. Carr MD, MAJ US Army
Stephen D. Jones MD, LTC US Army

The cardiac surgery program at Tripler Army Medical Center was started in 1985. In the ensuing 11 years, the program's steady growth has culminated in a mature, stable open heart surgical service. The Cardiothoracic Surgery Service consists of two military cardiac surgeons, three full-time perfusionists and one secretary. The operating and administrative duties are those customary to a military hospital. The team includes dedicated operating room technicians and nurses, anesthesiologists and is supported by a fully equipped surgical intensive care unit.

Tripler Cardiothoracic Surgery actively participates in quality assurance reviews both at Tripler and across all Department of Defense health care facilities. Tripler participates in The Society of Thoracic Surgeons National Database for Cardiac Surgery, allowing tracking of outcomes and a comparison of Tripler's results to a national standard. Regular consultation with civilian and military cardiac surgeons is utilized to advantage, including consultant visits from civilian congenital heart surgeons. The service contributes to Tripler's teaching mission by participation in the education of general surgery residents.

The cardiac surgery service at Tripler supports a busy cardiology service which includes full interventional capacity. Together, the Cardiology and Cardiothoracic Surgery Services care for a wide range of cardiac patients from the Hawaiian Islands, the south Pacific and the Far East. Cardiac surgery patients include active duty military members and their families as well as military retirees and civilian patients from the Marshall Islands and other Trust Territories. Under a cooperative agreement between the Department of Defense and the Department of Veteran's Affairs, VA patients from the Hawaiian Islands have also received open heart surgery at Tripler. The geographic diversity and widespread catchment area underscore both the unique nature of this cardiac surgery practice and it's contribution to the health and well-being of Tripler's diverse patients population.

Tripler Cardiothoracic Surgery supports the "Island Program." This program is congressionally funded, and was spearheaded by U.S. Senator Daniel Inouye. It finances medical care for severely ill patients from the Federated States of Micronesia, Samoa, the Republic of the Marshall Islands, Guam, Saipan, and the Republic of Palau. A Tripler cardiac surgeon and a cardiologist go to these destinations on a quarterly basis to identify critically ill patients with congenital or acquired cardiac disease. These patients are then brought back to Tripler where they undergo surgery and remain for a brief convalescence before returning home.

Tripler also provides a complete range of non-cardiac thoracic services to include esophageal, lung and mediastinal surgery. Both of Tripler's thoracic surgeons are recently trained in the most up-to-date techniques of video assisted throracoscopic surgery. The nature of Tripler's patient population has provided the service a wide range of experience treating advanced and complicated infectious and malignant thoracic disease processes.

No description of a cardiac surgery program is complete without mention of surgical results. In the last two years, over 200 open cardiac procedures have been done by Tripler's Cardiac Surgery Service, with impressive results. During 1996, there were no deaths on either elective coronary procedures or elective valve procedures. These results compare favorably with the national average mortality of 2% for coronary bypass and 5% for valve surgery.



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The Death of an Innocent

Larry Fontanilla Jr, MS-II
John A. Burns School of Medicine

It is ironic that moments which hold the promise for life's greatest joys, necessarily hold a similar capacity to become our most devastating sorrows. Call it cosmic irony, the flip side of the coin, or balance of yin and yang, it is the tragedy which inspires art and the real substance of our lives' experiences. Take for example that you are an expecting parent.

Think of it, the day of your child's birth. For nine months, you have been anticipating this day; perhaps imagined this very moment. For nine months, you have been through morning sickness, cravings, weight gain, lower back pain, incontinence, and fetal Tae Kwon Do (as mother or father). For nine months, you have begun dreaming for your child... blonde or brunette, poet or physician, birthdays, graduations, and christenings. And for weeks now, you've felt that strange mix of nervous, gut-wrenching anxiety coupled with an ebullient expectancy for the sheer joy, that's just around the corner. Then the moment arrives, and thus begins the chaotic rush, which you know you won't ever be able to fully recall, but which you also know, you'll never forget. But wait... isn't this taking a little long? What did that nurse just say? What was that? ...a little girl? ...but, -wait, wait, where are you taking her? Wait, what did you just say? What's wrong?

The doctor has quietly come out and explained,"...your wife has given birth to a six pound baby girl. However, there are problems. Your wife is fine, and you can go in and see her as soon as we are done. However, your daughter is in the neonatal intensive care unit. As far as we can tell at this time, she has a condition known as hypoplastic left heart syndrome. It is lethal, if left untreated. Weren't you made aware of this by your obstetrician? -Oh, you're Jehovah's witness."

And there, the worst moment of your life just got worse. You see, the only chance your new child has for life, are a series of surgeries known as the Norwood procedure, or a complete heart transplant... both of which will never be performed without a blood transfusion. Yet, this is just not an option. It cannot be. Not for you. Not as a Jehovah witness.

Now, try a change in perspective. What would you do here as a physician? Would you seek a court order, and have the child treated? Or would you leave the decision to the parents, well knowing that this may mean death for the newborn?

However, before you make your decision, you should know a few unique points about this scenario. First, the Norwood procedure, which may partially repair the child's heart and prolong her life, is by no means curative. Also, because of the issues surrounding transfusion, the doctors may not place the child on the waiting list for a heart transplant. The likely legal delays could very well keep the heart from another needy child. Lastly, both the Norwood procedure and the heart transplant carry high mortality rates. Therefore, probability indicates that there will be little difference in outcome between treatment and non-treatment. After nasty legal maneuvers, a healthy trampling of the constitution, and amidst all of the emotion and turmoil on both sides, the child will most likely die. Now then, what should you do?

Why pose this question, some ask? Why such a detailed and specific scenario? Isn't it so complex and hypothetical that the discussion is moot? In actuality, this scenario is not hypothetical at all, but occurred this year in Irving, Texas. The surgeons in charge decided to leave the decision for treatment in the hands of the parents, and no court order was sought. In a statement from the University of Texas Southwestern Medical Center at Dallas, the surgeons explained, "whether treated or not, (her condition) has a high mortality risk and has little chance of a cure...In cases with such a grave prognosis, where non-treatment is a reasonable option, we believe the decision to pursue treatment is best made by the families involved" (Young, 1996, A8). Valerie Marie Hernandez died on January 25, 1997.

There is also another reason to discuss this case in specific, and it is because it is unique. The very complexity which makes the case nearly moot, makes it difficult to cite standard decisions, and forces the doctors to make an ethical choice of their own. Cases that are black and white are both less common and of less personal interest. It is what we choose, less as a profession, but more as an individual that will define the doctors that we are or will become. It is the decision we make: with the 72 year old, with only a tendency to wander, refusing treatment; with the 61 year old couple seeking in vitro fertilization with an egg donor; with a colleague you've witnessed perform some type of professional indiscretion; or something as little as making a sexual history a standard part of your work up, regardless of comfort level.

In this case, the chance for a child's life is weighed against parental rights and freedom of religion. In cases similar to this, where treatment is assured to benefit the child, the solution seems time tested. Typically, a family court issues an order taking custody away from the parents, and placing the child in protective services. Once this is established, by order of the court, the child will receive the medical procedures deemed necessary, and within the best interest of the child. After recovery, the situation is reevaluated and the child may be returned to the parents' care.

However in this case, what exactly is the best interest of the child? It is not as simple as choosing life or death. Instead, the choice lies between two courses of action which probability determines will end with the same result... death of the infant. In such a situation then what makes anyone's opinion anymore justifiable than that of the child's own parents. Wouldn't it be simpler for all, to allow these parents what little time they might have with their child, free from legal, religious, and medical battles? (But then again, what's simple, is rarely what's "right.")

Still, isn't a chance at life better than assured death? If there were only a one percent chance of survival with the proper medical treatment (Norwood palliation followed with subsequent transplant), wouldn't that 1 in a 100 chance be worth taking for this child's life? If not, would two percent be enough? How about five? Ten? How high would the success rate have to climb for us to take action on behalf of this innocent, this patient, who is unable to take any action for herself? It is a serious question, which everyone

involved must come to answer on their own.

Say that a court order was obtained, and that the best case scenario ensued. Who stands to gain?

Some might say the parents, simply because they have a daughter, where they might have lost her. However, after they've gone through the hurt and pain of having a child diagnosed with a lethal disease, they then lose custody of that child to the state. Furthermore, the state and the hospital proceed to violate that child and essentially damn her in the life hereafter. For the rest of their lives, they'll live with that knowledge, and in some sense guilt. And after all is said and done, it is questionable whether they can get their daughter back. Have they gained? Not in their eyes.

The daughter then, surely has gained. She is alive. Yes, but she will always live with two hard facts. First, should she grow and adopt her parents' religion, she will live her life with the knowledge that she is damned in the afterlife, through no fault of her own. Furthermore, (despite how piously she may live) there is nothing she will ever be able to do to remedy that. Secondly, regardless of what religion she may adopt, she will have to live with the knowledge that her parents were willing to allow her to die. There aren't many who can imagine the horrific ramifications that might entail, nor should anyone have to. Aside from these facts, she will probably wrestle with a host of issues including alienation, isolation, and poor self-body image. This all rests on the assumption that she is returned to her parents and does not become a ward of the state. Has she gained? Surely, this is difficult to say.

The state, perhaps it has gained. It has won the battle and saved the life of this child, too helpless to defend herself. However, it had to overcome two significant freedoms in order to do this. First, it berated (at the least) the freedom of religion. These parents believed that their child's mortal life was worth the sacrifice, if the alternative meant eternal damnation. Of course, a lengthy theological debate could ensue, but the issue at stake here is not whether the belief is "right," but whether the parents have the right to this belief. For the court order to be issued, someone outside of this family said that this belief or value is wrong or unfounded, probably just because they do not share it. Surely, the court would deny this. However, how else can one sensibly respect such a religious belief (as is guaranteed by the Constitution) and still act against the parents?

One might answer that the child did not have the chance to choose this religion. How can it be assumed that she would hold the same belief? This brings up the second right temporarily overlooked by the court system, parental rights. Should the state ever have a say in the choices that parents may make for their children? If a parent's choices are not in the best interest of the child, then the state must protect that child from the parent. Clearly, this holds true for obvious instances of abuse or neglect. However, aren't Valerie's parents trying to make the best possible choice for their child? I suggest that if the state is allowed to intervene here, logical progression of such a stance may include the state garnishing a family's wages to pay for orthodontics that it deems "in the best interest of the child." Else, it may take children away from poorer families and place them with richer families, if it considers that "in the best interest of the child." Furthermore, most drastically, for the sake of the children, the state might mandate who may and may not have children. These hyperboles may seem ridiculous, but they do illustrate the difficulty in assessing whether parents' rights to speak and act for their children should be overridden. Has the state gained then? It could be said so, but only at the expense of two pillars of its foundation.

The medical community, then, must have gained. This finally might be true. Another life has been saved. The statistics for the procedures and for the surgeons have risen. The medical center gains positive publicity for its dedication to a helpless, desperate infant. And laurels, respect, and new business are rolling in from around the country. All they needed to sacrifice was the enlargened divide between the medical community and a minority religion. It is not unreasonable to say that actions like the proposed court order may keep future patients away. They may elect to seek alternative treatments, or faith healing (which would not damn their souls), rather than turn to an institution which they know will not honor their own beliefs and values. However, let's neglect this hypothetical outcome for a moment to assess the status of the medical community. Yes, it has gained, but is this reason enough to put all other parties through their torments?

Recall also that this was a best case scenario. In all likelihood, in the midst of the battles and emotions, the personal struggles and pain, little Valerie would remain as dead as if she were left in peace.

It is my opinion then, that the doctors at the University of Texas Southwestern Medical Center at Dallas made the proper decision in not seeking a court order, for a number of reasons. First and foremost, since the prognosis of treatment and non-treatment are so similar, in cases without religion as an issue, many institutions leave the decision in the hands of the parents. There should be no reason to change this attitude simply because of a family's religion. Next, there are the pain and lifelong struggles with personal and religious issues that would plague both parents and child. Yes, the child may live, but at what cost to them? Third, in order to obtain a court order, significant civil rights must be violated. These issues themselves are not without ramifications. Lastly, such a court order could only further divide the chasm growing between the medical community and certain religious groups. It is a difficult question, but is this one case, worth the many other future cases that would never arrive at our attention, because of a Jehovah's witness' fear of being violated by our values and protocols, and not their own? It is sad, and it is difficult, but perhaps, the only ethical thing to do is to honor the parents' religion and choice, even if it means the death of an innocent.

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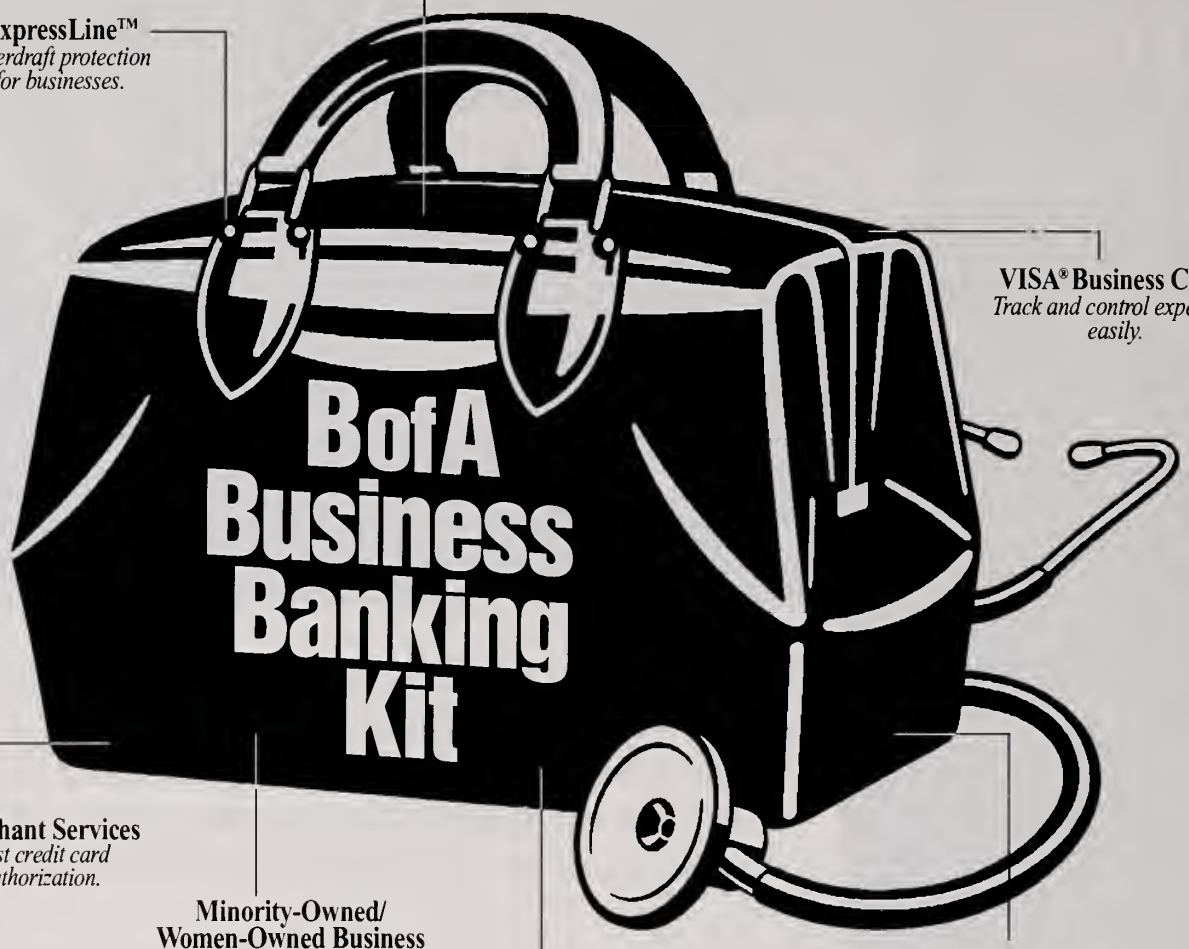
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Assisted Suicide in Switzerland When is it Permitted?

Prof. Dr Meinard Schar, President, EXIT, Swiss Society for Humane Dying, Zurich
Presentation at the Hemlock Hawaii Annual Meeting
November 2, 1996, Honolulu, Hawaii

Editor's Note:
Dr Schär was Professor of Social and Preventive Medicine and Professor of Pharmacology at the University of Zurich for 20 years. He has also served as Vice-Director of the Swiss Federal Office of Public Health. Prior to his presentation at Hemlock Hawaii, Dr Schär participated in the 11th International Congress of the World Federation of Right-to-Die Societies in Melbourne.

When I began to collate information on the progress made with regard to the legalization of assisted suicide I felt very optimistic. Especially encouraging were reports from Oregon and other U.S. states as well as from the Northern Territory of Australia. But my optimism was soon dampened by press releases from the same countries; Let me mention just a few of them:

Under the title: "U.S. doctors reaffirm opposition to Euthanasia" the *British Medical Journal* reports on the annual delegates meeting of the AMA in Chicago in July 1996. Some 430 delegates voted against euthanasia with the argument that doctors should be healers, not killers. The AMA delegates admitted that individuals have every right to control their own destiny. This does not mean, however, that they have a right to have their physician, their trusted partner in health, assist them to die. At the meeting of the AMA in Chicago there was only one doctor opposing this motion. The physician, in question, Ulrich Danckers, said doctors should not substitute their judgment for that of their patients:

> "It is intellectually dishonest for us to collectively get on our high moral horse by declaring the practice unethical and then look the other way when our members in even larger numbers quietly endorse the practice at the bedside."

This is also our opinion! As you will hear a little later, the Swiss medical Academy is strictly opposed to active voluntary euthanasia and physician assisted suicide, however, it sanctions indirect bedside euthanasia.

In August 1995 the Editor of the *Star-Bulletin* of Hawaii gave an update on the right-to-die movement which puts the issue of euthanasia in proper perspective. He summarized the situation in those days (August 1995) as follows:

> "A year ago the right-to die movement was energized by its effort to persuade Oregon voters to approve the first legislation in America authorizing assisted suicide. It prevailed by 51 to 49 but has not gone into effect. All across America, states are still waiting for court decisions."

Under the title "Police and People" the British Journal *"Lancet"* writes: The Northern Territory's Rights of the Terminally ill Act came into operation this week despite a challenge to its validity by the Northern Territory branch of the Australian Medical Association. On a national level, the issue has led to a constitutional debate about the powers of states and territories to make laws. In the meantime the legislation has come into force. The doctor of 65-year-old Max Bell is searching for the required second doctor whose declaration, together with that of a psychiatrist, will enable Bell to be assisted to die. (In the meantime—as I am told—Mr Bell died in a natural way).

In an article which appeared recently (September 1996) in the *Honolulu Advertiser*, Geoff Spencer of the Associated Press writes:

> *"The Northern Territory's legislature became the first in the world to pass a voluntary euthanasia law last year. It took effect July 1st but its future is uncertain."*

Then Spencer describes the case of the 66-year-old Mr Dent who died with dignity with his wife, Judy, by his side.

I am sure that you know the story of Mr Dent, and certainly you have heard of Dr Nitschke the inventor of the computerized death machine. But was Mr Dent really the first person to kill himself legally under the world's only voluntary euthanasia law?

Assisted Suicide in Switzerland

Switzerland, one of the smaller countries of Europe, has seven million inhabitants. Since one-seventh of the Swiss population is more than 65 years old a high morbidity rate is to be expected. The chronic-degenerative diseases are the main cause of increased morbidity and mortality. Medical technology can prolong the lives of the elderly and the chronically ill but it cannot keep them independent, free of health troubles, or competent to manage their own affairs. Medical technology can also improve palliative care, that is, care whose aim is the control of symptoms. However, we must remember that in 5 to 10% of the cases of cancer symptoms cannot be relieved of all or only at the cost of loss of individual personality.

Table 1.—Some Statistical Data on Switzerland

	1900	1990
Population	3, 3 million	6, 9 million
Persons 65 and over	300,000	1, 1 million
General mortality	18/1000	9/1000
Infant mortality	140/1000 new-born	7/1000 new-born
Life expectancy	49 years (males)	75 years (males)
	51 years (females)	82 years (females)

Continued on Page 67



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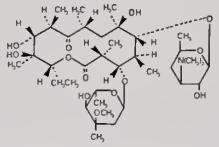
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Chemically, erythromycin is ($C_{37}H_{67}NO_{13}$). It has the following structural formula:



Erythromycin has the molecular weight of 733.94. It is a white crystalline powder and has a solubility of approximately 1 mg/mL in water and is soluble in alcohol at 25°C.
BENZAMYCIN® Topical Gel also contains benzoyl peroxide for topical use. Benzoyl peroxide is an antibacterial and keratolytic agent.
Chemically, benzoyl peroxide is ($C_{14}H_{10}O_4$). It has the following structural formula:



Benzoyl peroxide has the molecular weight of 242.23. It is a white granular powder and is sparingly soluble in water and alcohol and soluble in acetone, chloroform and ether. Each gram of BENZAMYCIN® Topical Gel contains, as dispensed, 30 mg (3%) of erythromycin and 50 mg (5%) of benzoyl peroxide in a base of purified water USP, carbomer 940 NF, alcohol 20%, sodium hydroxide NF, docusate sodium and fragrance.

CLINICAL PHARMACOLOGY

The exact mechanism by which erythromycin reduces lesions of acne vulgaris is not fully known; however, the effect appears to be due in part to the antibacterial activity of the drug. Benzoyl peroxide has a keratolytic and desquamative effect which may also contribute to its efficacy. Benzoyl peroxide has been shown to be absorbed by the skin where it is converted to benzoic acid.

MICROBIOLOGY

Erythromycin acts by inhibition of protein synthesis in susceptible organisms by reversibly binding to 50 S ribosomal subunits, thereby inhibiting translocation of aminoacyl transfer-RNA and inhibiting polypeptide synthesis. Antagonism has been demonstrated in vitro between erythromycin, lincomycin, chloramphenicol and clindamycin.
Benzoyl peroxide is an antibacterial agent which has been shown to be effective against Propionibacterium acnes, an anaerobe found in sebaceous follicles and comedones. The antibacterial action of benzoyl peroxide is believed to be due to the release of active oxygen.

INDICATIONS AND USAGE

BENZAMYCIN® Topical Gel is indicated for the topical treatment of acne vulgaris.

CONTRAINDICATIONS

BENZAMYCIN® Topical Gel is contraindicated in those individuals who have shown hypersensitivity to any of its components.

WARNINGS

Pseudomembranous colitis has been reported with nearly all antibacterial agents, including erythromycin, and may range in severity from mild to life-threatening. Therefore, it is important to consider this diagnosis in patients who present with diarrhea subsequent to the administration of antibacterial agents.
Treatment with antibacterial agents alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by Clostridium difficile is one primary cause of "antibiotic-associated colitis."
After the diagnosis of pseudomembranous colitis has been established, therapeutic measures should be initiated. Mild cases of pseudomembranous colitis usually respond to drug discontinuation alone. In moderate to severe cases, consideration should be given to management with fluids and electrolytes, protein supplementation and treatment with an antibacterial drug clinically effective against C. difficile colitis.

PRECAUTIONS

General: For topical use only; not for ophthalmic use. Concomitant topical acne therapy should be used with caution because a possible cumulative irritancy effect may occur, especially with the use of peeling, desquamating or abrasive agents. If severe irritation develops, discontinue use and institute appropriate therapy.
The use of antibiotic agents may be associated with the overgrowth of nonsusceptible organisms including fungi. If this occurs, discontinue use and take appropriate measures.
Avoid contact with eyes and all mucous membranes.

Information for Patients: Patients using BENZAMYCIN® Topical Gel should receive the following information and instructions:
1. This medication is to be used as directed by the physician. It is for external use only. Avoid contact with the eyes, nose, mouth, and all mucous membranes.
2. This medication should not be used for any disorder other than that for which it was prescribed.
3. Patients should not use any other topical acne preparation unless otherwise directed by physician.
4. Patients should report to their physician any signs of local adverse reactions.
5. BENZAMYCIN® Topical Gel may bleach hair or colored fabric.
6. Keep product refrigerated and discard after 3 months.

CARCINOGENESIS, MUTAGENESIS AND IMPAIRMENT OF FERTILITY

Data from a study using mice known to be highly susceptible to cancer suggests that benzoyl peroxide acts as a tumor promoter. The clinical significance of this is unknown.
No animal studies have been performed to evaluate the carcinogenic and mutagenic potential or effects on fertility of topical erythromycin. However, long-term (2-year) oral studies in rats with erythromycin ethylsuccinate and erythromycin base did not provide evidence of tumorigenicity. There was no apparent effect on male or female fertility in rats fed erythromycin (base) at levels up to 0.25% of diet.
Pregnancy: Teratogenic Effects: Pregnancy CATEGORY C: Animal reproduction studies have not been conducted with BENZAMYCIN® Topical Gel or benzoyl peroxide.
There was no evidence of teratogenicity or any other adverse effect on reproduction in female rats fed erythromycin base (up to 0.25% diet) prior to and during mating, during gestation and through weaning of two successive litters.
There are no well-controlled trials in pregnant women with BENZAMYCIN® Topical Gel. It also is not known whether BENZAMYCIN® Topical Gel can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. BENZAMYCIN® Topical Gel should be given to a pregnant woman only if clearly needed.

Nursing Women: It is not known whether BENZAMYCIN® Topical Gel is excreted in human milk after topical application. However, erythromycin is excreted in human milk following oral and parenteral erythromycin administration. Therefore, caution should be exercised when erythromycin is administered to a nursing woman.

Pediatric Use: Safety and effectiveness of this product in pediatric patients below the age of 12 have not been established.

ADVERSE REACTIONS

In controlled clinical trials, the total incidence of adverse reactions associated with the use of BENZAMYCIN® Topical Gel was approximately 3%. These were dryness and urticarial reaction.
The following additional local adverse reactions have been reported occasionally: irritation of the skin including peeling, itching, burning sensation, erythema, inflammation of the face, eyes and nose, and irritation of the eyes. Skin discoloration, oiliness and tenderness of the skin have also been reported.

DOSAGE AND ADMINISTRATION

BENZAMYCIN® TopMical Gel should be applied twice daily, morning and evening, or as directed by a physician, to affected areas after the skin is thoroughly washed, rinsed with warm water and gently patted dry.

How Supplied and Compounding Directions:

Size (Net Weight)	NDC 0066-	Benzoyl Peroxide Gel	Active Erythromycin Powder (In Plastic Vial)	Ethyl Alcohol (70%) To Be Added
23.3 grams (as dispensed)	0510-23	20 grams	0.8 grams	3 mL
46.6 grams (as dispensed)	0510-46	40 grams	1.6 grams	6 mL

Prior to dispensing, tap vial until powder flows freely. Add indicated amount of ethyl alcohol (70%) to vial (to the mark) and immediately shake to completely dissolve erythromycin. Add this solution to gel and stir until homogeneous in appearance (1 to 1½ minutes). BENZAMYCIN® Topical Gel should then be stored under refrigeration. Do not freeze. Place a 3-month expiration date on the label.

NOTE: ***Prior to reconstitution, store at room temperature between 15° and 30°C (59° – 86°F).***
After reconstitution, **store under refrigeration between 2° and 8°C (36° – 46°F).**
Do not freeze. Keep tightly closed. Keep out of the reach of children.

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References: 1. Data on file, Dermik Laboratories, Inc. **2.** Data on file, Dermik Laboratories, Inc. **3**. Faster and better results than either component alone.

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The Right to Die with Dignity

In Swiss public polls about dignified dying there is always a majority in favor of active euthanasia and assisted suicide and nearly 100% agree with passive euthanasia. The results of polls with physicians or religious groups are in stark contrast. Whereas 60% of physicians who are members of the Swiss society for humane dying (EXIT) agree with active euthanasia under certain circumstances, the physicians who are not members of EXIT are mainly against active euthanasia and assisted suicide. In all countries suicide is not forbidden but in almost all countries assisted suicide will be prosecuted by law. (In Britain the penalty for assisting a suicide is up to 14 years imprisonment). Why can a suffering person commit suicide and why is it forbidden to provide professional guidance to him or to her?

As early as 1937 a law was enacted in Switzerland which allowed assisted suicide under certain conditions. Article 115 of the Swiss penal code reads as follows:

> A person who, for selfish motives, persuades or assists another person to commit suicide will be punished with imprisonment up to five years.

Thus, assisted suicide seems no longer to be a problem. That is, in reality not the case. There is much opposition to this liberal law. The Swiss Academy of Medical Sciences e.g. clearly states that helping a person to commit suicide is not task for a physician. The predicament is that a physician is the only qualified person for giving help to a seriously ill patient who wants to die. Whereas the aforementioned academy is against assisted suicide, it agrees with indirect euthanasia. The physician is allowed to give a terminally ill person high doses of drugs for the relief of pain or other serious symptoms but not to shorten the life of the patient. (The physician may kill a patient with an overdose of morphine and he will not be prosecuted by law if it was his intention to treat symptoms only; however if his intention was to terminate the life of the patient, then he may be punished by a prison term of at least five years. It would be preferable to allow controlled, documented voluntary euthanasia, than to prohibit the practice officially while allowing it to be carried out clandestinely without any controls.)

Table 2.—Swiss laws pertaining to "Killing on Demand" (incl. "Mercy Killing") and "Assisted Suicide."

Article 114
A person who ends another persons life for human motives, namely for pity, at the serious and urgent request of that person will be punished with imprisonment.

Article 115
A person who, for **selfish** motives, persuades or assists another person to commit suicide will be punished, in case of completed or attempted suicide, with penal servitude up to five years or with imprisonment.

Table 3.—Directives of the Swiss Academy of Medical Sciences (Excerpt)

The Right and Responsibilities of the Physician:

- The physician has to cure or alleviate diseases and to maintain health.
- With dying patients he relieves pain and suffering but he can waive the use of life prolonging measures; e.g. artificial respiration or tube feeding.
- By using palliative-medical techniques the physician may risk the shortening of life.
- The physician has to respect the "Living Will" of a patient but it is not his task to assist a person to commit suicide.

The practice of assisted suicide

EXIT issues a manual for competent but incurably ill patients who request help in dying. Adult persons who are members of EXIT for at least three months can obtain this booklet from the headquarters of the organization. It contains all the necessary information regarding the help EXIT can offer, and a detailed description of the procedure. Formerly a brochure was handed out to members who asked for instructions about the means and methods for committing suicide. (This brochure was withdrawn from sale about five years ago.) Recently a "Drug Booklet" has been issued by two European Right-to-Die Societies which contains detailed instructions on the various methods of suicide. This booklet may be useful for hypochondriacs but is certainly of no practical help for seriously ill patients who do not want to suffer any longer from unbearable pain and other serious symptoms.

Seriously sick people need help! They cannot wait for weeks before they can commit suicide. All the medication listed in the aforementioned drug booklet can be obtained on prescription only. The patient, who anyway will have a guilty conscience, would have to lie to his physician or deceive the pharmacist. In addition he cannot be sure that the recommended substance reacts the same way in all persons, and then, there is the risk of vomiting with resultant loss of efficacy of the administered medication. These are the main reasons why we withdrew such booklets and why we do not recommend lists of drugs which might be used for self-delivery.

The EXIT-procedure for assisted suicide

1. The patient personally (not relatives of friends) makes contact with the headquarters of EXIT (day and night service).
2. A collaborator of EXIT visits the patient in order to establish that it is the genuine wish of a person of sound mind who decides and that he is not coerced or influenced by a third person. Then a date for assisted suicide is fixed.
3. The patient will be invited to ask his physician for a certificate of the diagnosis and—if possible—prognosis.
4. The decision as to whether assistance in dying can be offered is taken by a physician of EXIT. (In doubtful cases a group of three collaborators—a lawyer, a physician and a psychiatrist—decide).
5. An EXIT helper then visits the patient and assists him to self-delivery. He promises the patient that he will stay with him until death has occurred. (This is very important because seriously sick and suffering patients are not afraid of death, rather their greatest fear is that they will wake up in an intensive care unit of a hospital). There is always a witness present, mostly a relative to whom the suicidal person has close contact. The patient is then given two tablets of *Dramamine*. (He or she becomes completely relaxed and talks freely about his or her life. There is no fear and no anxiety about dying). After half and hour the patient is given 10g of sodium-pentobarbitone (a barbiturate) dissolved in about 100 to 150ml of tap water (No mineral water!, because the carbon dioxide precipitates the barbiturate and therefore prolongs the absorption time).
6. Within less than 5 minutes the patient will fall into a deep sleep and within 2 hours—with few exceptions—he will die peacefully.
7. Immediately after death we call the police. The prosecution attorney, the coroner, a criminologist and other "officials" will show up in order to find out whether or not laws have been

Table 4.—Preconditions for Assisted Suicide (EXIT, Swiss Society for Humane Dying, Zurich)

The person applying for assisted suicide has to be:

- 18 years old or older
- Mentally competent
- Member of EXIT
- Resident of Switzerland
- Suffering from a serious illness and/or unbearable health troubles with poor prognosis
- Willing to die with the help of EXIT

The diagnosis of the disease and its prognosis have to be confirmed by a physician.

Table 5.—Suicide in Switzerland 1993 (Swiss statistical yearbook)

Gender	Number of Cases	Mortality Rate per 100/000
Men	1010	28.3
Women	403	10.3
Men 65 years old and older	235	58.7
Women 65 years old and older	114	18.7

Table 6

Method of Suicide	Number of Cases			
	Men		Women	
	No: Cases	%	No: Cases	%
Medicaments	14	6	16	14
Poisoning	9	4	14	12
Gassing	8	3	2	2
Hanging	62	**26**	16	14
Drowning	17	7	31	**27**
Shooting	75	**32**	1	1
Stabbing	4	4	1	1
Fall	31	13	29	**26**
Vehicular Impact (Train/Car)	9	2	3	3
Burning	6	3	0	0
Total	235	100	113	100

Until there's a cure, there's the American Diabetes Association.

violated. Up to now no collaborator of EXIT has had to appear before the court from helping a person to commit suicide.

What is EXIT?

EXIT of the German speaking part of Switzerland is a registered association for humane dying. (An identical association exists in the French speaking part of the country.

EXIT

- Respects the right of self-determination of every human being.
- Respects the right to self-deliverance of seriously and hopelessly ill patients.
- Issues "Advance Directives" to its members and assures them legal protection in case of disregard of the "Living Will" of a patient.
- Issues a manual for assisted suicide to its members and offers assistance to those members who are terminally ill and who wish to die.
- Establishes hospices for terminally ill patients where palliative care is offered.
- Publishes a quarterly bulletin and establishes contact to other organizations with similar aims.
- Is a member of the World Federation of Right-to-Die Societies.

EXIT was founded in 1982 and has currently more than 60,000 members. Two-thirds of the members are aged over 50 years and about 60% are women.

Since the 'Living Will' issued by EXIT is respected by physicians and the nursing staff of hospitals, EXIT had only rarely to interfere with hospital treatment of its members.

One of the main tasks of EXIT is the counseling of patients and assisting seriously sick and terminally ill patients to die. The number of members asking for assisted suicide is steadily increasing but there is no corresponding increase of the total number of deaths due to suicide. The trend, however, is clear: more elderly persons die from assisted suicide but a decreasing number die as a result of inhumane methods of suicide, such as shooting, hanging or drowning.

On average 100 to 120 patients/year commit assisted suicide in Switzerland. The most frequent diagnoses are: cancer (70%); cardiovascular diseases (10%); neurological disorders, including disseminated sclerosis and ALS (10%); skeletal disorders (5%) and AIDS (5%).

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- Smoking costs the U.S. about $50 billion in annual medical care
- Every day about 3,000 young Americans start smoking



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Voluntary Euthanasia in The Northern Territory—Australia

The Honorable Marshall Bruce Perron
Former Chief Minister of the Northern Territory
Darwin, Northern Territory
Address to the National Press Club, Cannberra, October 16, 1996

Editor's Note:

Marshall Perron, as Chief Minister of the Australian Northern Territory, was responsible for the first legislation in the world to permit active voluntary euthanasia. Mr Perron, who has now retired from politics, was a member of the Northern Territory Parliament for 21 years, and Chief Minister from 1988 to 1995.

The cast of characters:

John Howard, Prime Minister of Australia; Kevin Andrews, Member of the Federal Parliament who is attempting to overturn the Northern Territory legislation; and Bob Dent, the first person assisted to die under the Northern Territory law.

Bob Dent's often-quoted words:

"What right has anyone, because of their won religious faith to which I do not subscribe, to demand that I must behave according to their rules?"

Thanks to Marshall Perron for permission to reproduce his address and the Australian statistics.

There are many reasons quoted for the escalating world-wide debate about voluntary euthanasia.

An educated, assertive patient population, less in awe of doctors than ever before. An aging community, less religious authority and increasing deaths from cancer and AIDS.

The most compelling factor to my mind, is that advances in medicine have brought us to the point where, when and how a patient dies is increasingly the outcome of a deliberate human decision.

Decisions to withdraw life support equipment, not to resuscitate or withholding antibiotics from a patient in advanced stages of terminal illness, are all instances of the intentional termination of life that is routine in developed countries today.

The sad part is—most of those who die by human intervention or deliberate non-intervention, have no say in the decision. By the time a decision needs to be made, they are in no state to participate.

The majority of Australians don't want decisions about when they will die being made for them by doctors, after they have lost competence or the ability to communicate. They want the option to arrange the timing of their own death if, like Bob Dent, things get really bad.

John Howard has access to voluntary euthanasia. Why should the rest of the community be denied?

While illegal euthanasia and assistance to suicide is practiced in all the states and territories, only the most assertive, articulate and resourceful patients are likely to be able to enlist the help of a doctor prepared to risk everything.

Kim Beazley, Tim Fischer, Kevin Andrews, indeed every one of the politicians about to decide if the Northern Territory Rights of the Terminally III Act is scuttled, can access doctors who will fulfill their request to die if circumstances warrant.

Sadly, the same access is not available to most of our citizens in their hour of need. If you have to take the next doctor on shift at the public hospital, or you can't get a doctor to treat you in your own home, or you do not have the resources to go shopping among doctors, then your chance of finding a sympathetic doctor who will break the law is about nil.

I don't object to John Howard saying he believes voluntary euthanasia is wrong and that he would never consider it for himself, but he has no more right to deny me or you the voluntary euthanasia option than does the Pope, Archbishop, the President of the A.M.A., or Kevin Andrews.

You see, the situation is exactly as it was before enlightened abortion laws were adopted. The rich and famous were always able to find qualified professionals prepared to do the job. For the rest of the population, it was just 'too bad'—or they went to the backyarders, or attempted the job themselves.

Often with disastrous results.

So too it is with euthanasia today.

Not only is this issue firmly on the agenda to stay, demands for individual autonomy over end-of-life decisions will become stronger with the advances in medicine which give doctors the ability to ward off death longer and longer while physical and mental degeneration continues.

Changes in social systems and standards of living have extended average life spans considerably. In 1900 we lived to about 51 years. Most deaths at the time were due to communicable diseases such as influenza, cholera, scarlet fever, measles, smallpox and tuberculosis. Such ailments are characterized by either recovery or death in hours, days or weeks.

It was not until the development of microbial drugs in the 1930's that doctors could begin to cure the disease, rather than simply try to relieve the symptoms.

The average life expectancy in Australia is now 75 years for males and over 80 for females.

Today, death in developed societies is mainly due to the effect of degenerative diseases like cancer, strokes and heart disease.

Although heart attacks and strokes sometimes cause rapid death, degenerative diseases like cancer result in gradual and increasing debilitation.

We have never lived so long, or died so slowly, occasionally with horrifying symptoms.

The advances that will bring welcome cures for diseases will extend the time it takes to die even further. This will mean a corresponding increase in the frequency of decisions to cease treatment to allow death to occur or to actively induce death.

Concern is expressed today that some patients are kept alive way

past any possible useful purpose. What if, in the next decade, we have the ability to keep everyone alive in a coma for years?

My resolve to promote the decriminalization of voluntary euthanasia stems from the fact that despite searching for one, I have never found a rational argument for insisting that an individual continue to endure pain, indignity and suffering when they would prefer to die.

I reject the notion that our quality of life, no matter how wretched, miserable or painful, is never so bad that any of us will be allowed to put an end to it.

It is preposterous that a patient like Bob Dent, after a five year battle with prostate cancer, having had several operations, unsuccessful hormone therapy, 25 kg. lighter, impotent, unable to urinate, losing bowel control, under 24-hour nursing care and still on a roller coaster of pain despite a regime of 30 tablets a day, could have died on the day he did from the effect of a doctor administering pain killing drugs.

The Pope, the Archbishop, the A.M.A. and Kevin Andrews would consider that as spiritually acceptable, morally responsible and lawful.

However, because Bob Dent asked a doctor to provide him the means to die, took a second opinion, considered palliative options, submitted himself to psychiatric examination, considered the implications for his family, endured a cooling off period and was then given the means to take his own life.

The hard core Christian minority was outraged.

The Vatican described Dent's death as "an absurd act of total cruelty"

Cardinal Clancy said it was murder.

Northern Territory Bishop Collins said it was immoral.

No humane compassionate person could condemn Bob Dent or the way he died. If you are one of those who would have denied him a final moment of control and dignity, that chance to cry with his wife—then you have no heart!

And you have no right to preach morals to me.

I have found nothing in the religious arguments, which demand the imposition of a belief on others, or the implausible claims that voluntary euthanasia will lead to patients being put to death against their will, to change my mind. Neither doctor, Church or family, should be allowed to override the patient in regard to the right to die.

Have you ever wondered how many doctors who find themselves with one of those awful diseases which invariably result in a painful, undignified death, endure the suffering until death comes naturally?

Or do they arrange with a trusted colleague, a time when death will be comfortably induced in private?

If this occurs, and we can be sure that it does, then it is only just and fair that the same option should be available to every citizen with the same symptoms.

We should not compel those doctors who are willing to assist suffering patients to shroud their actions in secrecy, away from potential witnesses and to falsify the death certificate to avoid criminal proceedings.

This clandestine activity, without safeguards or scrutiny, brings with it a potential for undetected error or abuse which should concern us all.

It is claimed that palliative care exists which can adequately handle all death situations and that there are no 'bad' deaths—only incompetent doctors.

Its is not true. The utopian palliative care service exists only in the minds of the very religious.

Even if the perfect service was available to everyone, it would never satisfy those who find the concept of total dependency so unacceptable that they would rather be dead.

I agree that voluntary euthanasia is not a substitute for best practice palliative care, but the reverse applies as well.

The advent of voluntary euthanasia would bring benefits to many more people in our community than will ever exercise the option.

Elderly Australians advise me that the option of voluntary euthanasia would relieve them of a great burden. Whilst in reasonable health now, many experience anxiety every day, knowing that aging process cannot be halted. The possibility of a miserable lingering death is constantly on their mind.

Their submissions appealed to all Territory politicians to understand that simply by having an option, hopefully never to be taken, they could face each day with the comfort of knowing that they will not experience the suffering that they have witnessed in others.

As one ninety-year-old wrote, "I do not fear death. I fear the way death will come."

I have had other letters and phone calls from terminally ill people who have obtained drugs to use committing suicide. In each case they were angry that they must take their lives prematurely for fear of losing control through hospitalization. They must die secretly and alone to avoid implicating family and friends.

As one such woman said to me, "My prognosis is, I will slowly become a blind vegetable. What would you do?"

We will never know how many suicides could have been at least delayed if the knowledge that the voluntary euthanasia option was there if things got really bad.

For example, in 1994 there were 137 suicides by people 75 or older, 31 of them by people 85 or older. Do we think some of these lonely suicides by the elderly might have been related to how they thought they would die if they did not take control?

I suspect, everyone of them.

And what of those poor souls who botch it, merely succeeding in killing half their faculties?

The intangible benefits, to the elderly and the sick, of reduced anxiety and trauma should not be overlooked in this debate.

There are Australians who have taken the life of a suffering terminally ill relative or friend at their request, following the doctor's refusal to help because it is illegal.

Examples of these tragic circumstances have been presented to me in recent times—medically unqualified Australians driven by compassion and frustration to kill a loved one.

I refer to cases which have never been investigated, where the family keeps the secret bottled up inside. I am sure you have all read of other sad cases of mercy killing which have made the courts.

Opponents to voluntary euthanasia claim there can be no safeguards which would protect us from the so-called 'slippery slope', that voluntary euthanasia must inevitably lead to involuntary euthanasia.

Their arguments, in my view, having read volumes on the subject, are strong on rhetoric and short on facts.

If ever there was a situation ripe for abuse, it has to be the situation prevailing in Australia today where some doctors assist some patients to die but there are no controls or safeguards.

How come the 'slippery slopers' are not yelling about that?

There is no doubt in my mind that adequate safeguards can be devised to ensure that those patients Parliament dictates should have access to voluntary euthanasia are the only ones legally able to receive the service.

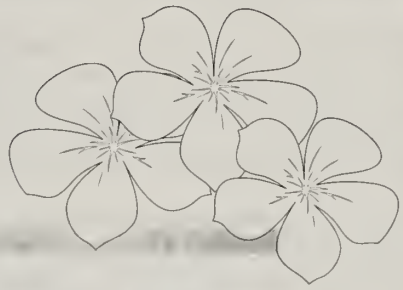
We could, for example, restrict voluntary euthanasia to patients who had been assessed by two psychiatrists, two specialists in the disease, two palliative care experts, the approval of next of kin, three independent witnesses, a three month cooling off period, the con-

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currence of a Supreme Court judge, and the whole process videotaped.

Obviously we don't have to go that far. The example is simply to demonstrate that safeguards can be put in place which prevent people who might opt for voluntary euthanasia simply because they are temporarily depressed, or who are being coerced by others, from being legally able to be assisted.

And if you want to be super conservative, legislation could require a patient to have signed an advance directive before they are diagnosed as terminally ill and/or require self administration of the lethal drug.

In my view, the claim that decriminalizing voluntary euthanasia must lead to the widespread use of euthanasia without patient consent, or even against the wishes of a patient, is unconvincing.

Such action would contradict the very basis on which voluntary euthanasia is proposed—the principle of respect for human freedom and autonomy.

Voluntary euthanasia is patient driven. The N.T. law dictates that the patient must personally initiate the process, consider the options for treatment and palliative care, be psychologically assessed, sign a request, obtain second options, consider the affect on the family, use qualified interpreters if necessary and endure a cooling off period. The patient can of course change their mind at any time and stop the process instantly.

Additionally, detailed records must be kept. Government regulations must be followed. The Coroner must be informed and has a statutory responsibility to report to the Attorney General and Parliament any concern regarding the operation of the legislation.

To kill another without these conditions being fulfilled is to commit murder under the Northern Territory Crime Code—penalty mandatory life in prison.

The scare that deformed or retarded babies, patients in mental institutions and homes for the aged will inevitably be unwilling victims is repeated by opponents at every opportunity in the debate.

The claim that it will lead to the practices adopted by the politically corrupt Germany in the 1930's and 40's has long been a major tactic of those opposed to voluntary euthanasia.

It is an insult to Australian doctors and others in the medical profession to pretend that they would be associated with such a wicked scenario.

The same applies to the media, our politicians, police and coroners.

It is surely preferable to have voluntary euthanasia tolerated in particular circumstances with stringent safeguards and a degree of transparency, than to continue to prohibit it officially while allowing it to be carried out in secret without any controls.

The quote "hard cases make bad law" is occasionally heard in this debate.

The Rights of the Terminally Ill Act is a law for hard cases. Only hard cases.

Yet it is a law that does not make anybody do anything.

It is generally conceded that about 2% of the dying experience symptoms which are difficult or impossible to relieve, hence the term 'hard' death. For those unfortunate people, even the best palliative care is of little value.

From the Northern Territory's population, an estimated 16 people per year fall into that category and may opt for assistance to die under the Act.

The figure for the rest of the country is 2,500 die 'hard' each year (7 people everyday).

In desperation, a few will consider traveling to the N.T. to seek help—sick, dying Australians moving from their homes, friends and relatives, in a bid to find the relief denied them elsewhere.

To Kevin Andrews MHR, from his safe seat in Melbourne—all this is too much. He was appalled at news that a West Australian man would take such extreme measures to die with dignity, and demanded that the option be removed.

How is that for sympathy and compassion from one of those charged with the welfare of the nation?

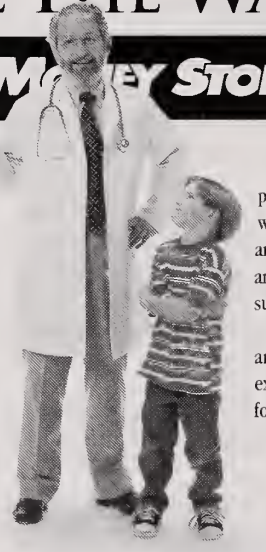
John Howard's support has made voluntary euthanasia a national issue. From now on every MHR and Senator is required to take a stand. Every candidate for federal parliament will be hounded until their views are known by the electorate.

Many, particularly those in marginal seats, will try hard to avoid taking a position, concerned that whatever side they take opponents will work hard to unseat them. And they will. I predict a substantial block of abstainers from the vote on Kevin Andrews' private member's bill.

Contrary to Kevin Andrews' assertion, the N.T. has not legalized voluntary euthanasia for the whole of Australia, any more than S.A. did when they were the first to legislate for termination of pregnancy. Of course, what terrifies

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Andrews and the Church hierarchy is that, like that example, voluntary euthanasia will be made legal across Australia.

And they are absolutely right.

It is easy to get angry about the moral minority who raise this challenge to the decision of a democratically elected parliament acting within its powers.

The self-righteous minority who believe they have a monopoly on wisdom about death and dying.

The hypocritical minority who believe in democracy only if they agree with decisions made.

The hard core Christian minority who can justify in their minds any human suffering no matter how great, who seek to impose their moral preferences on us all.

I have a message for them. It is not only members of the N.T. Legislative Assembly who support voluntary euthanasia. There are ten million adult Australians out there who want that option.

How can you say to the terminally ill,

"As long as there is a flicker of life in your decaying body—you must stay with us—you have no choice?"

How can you tell them you know better than the doctors, the nurses and the palliative care experts with a lifetime of experience with the dying?

If the real answer is—that you can never agree to voluntary euthanasia under any conditions because you have a fundamental religious objections, because you believe that only God can give life and only God can take it, then be honest and say so. No one will criticize you for that!

When you have made that admission, get out of the way so the rest of us can get on with adopting some compassionate, humane laws for those who do want the voluntary euthanasia option.

There are more academics, doctors, nurses, judges, lawyers, engineers, taxi drivers or whatever, who believe voluntary euthanasia should be decriminalized than believe it should not be.

Every major poll taken in the western world confirms similar public support. Significantly, support also come from 69% of people who identify as Catholic, 73% Presbyterians, 76% Methodists and 81% Anglicans.

We are not asking you to lead public opinion Mr Howard, we are asking you to catch up with it.

In fact you are being asked to bow out!

Over 70% of all Australians support what the N.T. has done.

They do not accept that the value judgments of our federal politicians are morally superior to those of state or territory politicians.

Voluntary euthanasia is not an issue for Federal Parliament. It is constitutionally an issue for the states and when, not if, a state legislates in this field, there will be nought the Federal Parliament can do about it.

The citizens of the Northern Territory elected just 3 of the 224 politicians who will decide if they can retain the right they currently have to voluntary euthanasia.

Ironically, the 214 federal politicians elected by the 6 states will have no say in whether the eighteen million Australians who reside in those states, gain the same rights.

Is it any wonder we in the Northern Territory think Kevin Andrews' bill is an outrage?

If his bill is passed, it will be a victory for the Church over democracy. A classic case of arrogant politicians ignoring the clear will of the electorate in favor of religious dogma. It would mean that to get voluntary euthanasia laws passed, we will need to weed out those who follow the dictates of the Church hierarchy at preselection or election.

I was never a student of political history but now I know why there must be a separation between the Church and the State.

A message to those elected to run our country. Most of the things you have done in public life, the candidate you defeated would have done just as well, or just as badly.

Only occasionally in history do you have the opportunity to do something that will make a profound difference to the lives of your constituents.

This is one of those occasions. Don't mess it up.

I close with a comment about the vocabulary which is used throughout these debates. We always describe the client group quite coldly as "patients."

The terminally ill are mothers, fathers, brothers, sisters, sons, daughters, wives and husbands. They are not just 'patients.'

They are people. People like you and me. People like Bob Dent.

That is who we are talking about.

We should never forget that.

Fact Sheet—Marshall Perron's Speech
National Press Club

Australian Statistics
(Source: ABS)

Population (at 30/6/95)		18,049,000
Adults (at 30/6/95) (20 years & over)		12,913,931
Population: Aust. Capital Territory (1995)		304,125
Northern Territory (1995)		173,878
Life Expectancy (1994)	70.0 years (male) 80.9 years (female)	
Total Deaths (1994)	(2423 per week) (346 per day)	126,863
Number of 'hard' deaths (1994) (2% of all deaths)		2,533 (7 per day)
Total suicides (1994)		2,258
74-84 age group	106	
85 and over	31	
	137	

Aged suicides, 75 years and over		
	1994	137
	1993	127
	1992	38
	1991	149
	1990	40
		491

Rxemedy Survey of 30,000 Americans Age 55 and Over Indicates Strong Support for the Right to Die

Sal Cataldi and Cori Case
Westport, Connecticut

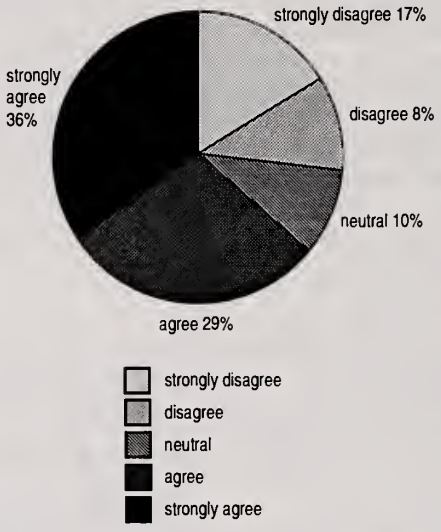
Rxemedy, Inc., a four-year-old information data base marketing company based in Bridgeport, Connecticut, studied the health practices and concerns of 55-year-olds and older consumer in 1.2 million households. Over 100,000 households returned the survey distributed via Rxemedy, its bimonthly health magazine. 30,000 surveys were selected to create the balanced sample that is nationally projectable. All respondents were aged 55 or older with a median of 71 years.

Here are the highlights of this very interesting study supplied by Rxemedy Inc. The complete results of the 44 question survey dealing with Living Wills and Euthanasia will be reported later.

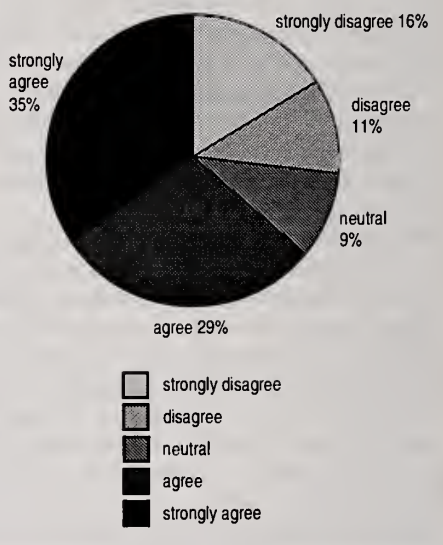
- 65% of the 30,000 mature Americans surveyed agree that the terminally ill should have a legal right to commit suicide with a doctor's assistance, and 64% favor enacting legislation to give people this right.
- 53% agree that physicians should be allowed to give people instructions on how to end their own life, 33% disagree.
- Religious beliefs are somewhat more of an obstacle for men than women: 43% of male respondents (vs 33% of female) say their faith would prevent them from considering suicide for themselves; even more, 48% of men (vs 43% of women) say their beliefs would prevent them from helping a terminally ill friend commit suicide.

Rxemedy, Inc. Right-to-Die Survey—December 1996. Projected Survey Results

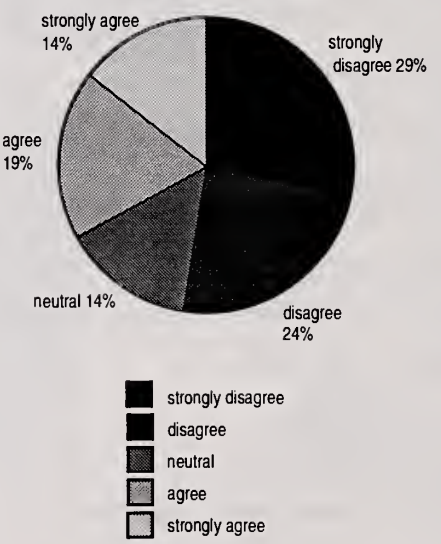
"People should have the legal right to commit suicide with a physician's assistance if they have a terminal disease, such as cancer."



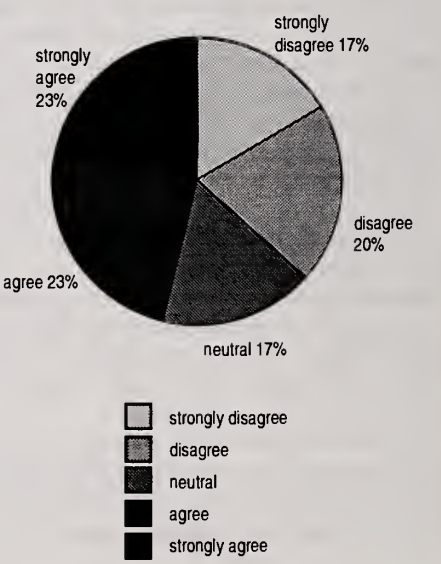
"I favor legislation allowing terminally ill patients to request a physician's assistance in ending their life."



"Physicians should not be allowed to give people instructions (such as how many pills to take) on how to end life."



"Religious beliefs would prevent me from helping someone to commit suicide."



News and Notes Henry N. Yokoyama MD

Life in These Parts

The Hawaii Diet

The results of the three week Hawaii Health Program were quite remarkable:

- Group weight loss was an average of 10.8 lbs per person
- Average cholesterol dropped 24% (average of 205 to 157 mg/dl)
- Average blood pressure fell from 130/79 to 120/75.

(The 23 participants included community leaders and individuals of Hawaiian ancestry)

Governor Ben Cayetano lost a total of 12 lbs and his triglyceride level dropped from 617 to 83; and his cholesterol level from 234 to 162.

Terry Shintani MD, director of the Hawaii Health Program and co-founder of the Hawaii Health Foundation said, "If Hawaii is to become a world center for health, its leaders need to be healthy. The Hawaii Health Program, rather than being simply a "diet" is a life-style change program. It lowers the fat content in Hawaii's popular ethnic dishes and aims to increase the awareness of the health needs of native Hawaiians. Optimal health is achieved through whole person diet and life-style changes based on universal, multicultural principles expressed in Hawaiian values of '*aloha*', '*lokahi*' (oneness) and '*pono*'; (righteousness/justice)."

Our Aging Population

The population in Hawaii aged 60 and above increased by 52.5% between 1980 and 1990; while the total population grew 14.9 percent. The oldest segment of this population, 85 years and older, increased 87 percent during this same period. *(Statistics from the state's Executive Office on Aging).*

By the year 2010, the 60-plus group is expected to grow by 53 percent to 265,800, or one in every five people. The 85-plus group will grow by 167 percent to 27,800 by 2010 and by 2020, this 85-plus group may grow by 242%, second highest in the nation behind only Nevada.

This rapidly growing elderly population in Hawaii is creating a massive demand for more personalized care and medical services. The financial strains on families, the elderly, private and government health insurance companies and medical and long term care facilities. (From an article in PBN by Malia Zimmerman)

Doctor Jokes

"The best thing for you," the doctor said, "is to cut out all sweets and fatty foods, give up alcohol and stop smoking."

"I see, " the patient said, "To be honest, I don't deserve the best. What's second best?"

"I can't do the things I used to do," the patient said to the doctor. "I wish you had some magic way of making me younger."

"You got it wrong," the doctor said. "My job is to see that you get older."

Doctor: "I can't do anything about your condition. I'm afraid it's hereditary."

Patient: "In that case, send the bill to my parents."

"It's just a cold," the doctor said. "There is no cure, and you just have to live with it until it goes away."

"But Doctor," the patient whined, "It's making me so miserable."

The doctor rolled his eyes toward the ceiling. Then he said, "Look, go home and take a hot bath. Then put a bathing suit on and run around the block three or four times."

"What?" the patient exclaimed, "I'll get pneumonia."

"We have a cure for pneumonia," the doctor said.

Elected, Honored & Appointed

(Gleaned from Hawaii Medical News Nov 1996)

The 140th HMA Annual Meeting in October at the Kauai Marriott Hotel gave out two awards for the physician of the year: **Elizabeth M. Adams**, retired Kailua psychiatrist was honored for her community service with the American Cancer Society and the League of Women Voters. The second award honored **Anna Maria and Roger Brault,** retired Kailua internist and general surgeon for their work in founding Hospice and their missionary work all over the world.

The 1997 HMA officers elected were President **John S. Spangler**; president-elect **Barry Shitamoto**; and secretary **Roger Kimura**. Also elected were AMA Delegate, **Allan Kunimoto** and alternate AMA delegates, **Frederick Holschuh** and **Stephen Wallach**. Speaker of the House is **Herbert K.W. Chinn**; Vice Speaker is **Patricia Blanchette**; Councilor from Maui is **Paul Wells** and the new Councilors from Honolulu are **Thomas Au, Cynthia Goto** and **Myron Shirasu.**

The National Commission on Cancer elected **Scott Hundahl** as their vice-chairman for 1997. Scott is currently Chief of Surgery at Queen's Medical Center.

John T. Berthiaume, who has served as chief of general medicine at Straub and chairman of the department of medicine at Pali Momi Medical Center, was recently named Vice President of Professional Affairs/Chief Medical Officer of Straub Clinic and Hospital.

Physician Moves

January—

Pediatrician **Carol Harley** opened her office at Kapiolani Medical Center POB Suite 1100. Orthopods **Edward Gutteling** and **Jean Marine**

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located at Hilo Orthopedic Center, 45 Mohouli Street announced that they were the official orthopedic surgeons for UH-Hilo Vulcans and Hawaii Winter Baseball-Hilo Stars. OB-GYN physician **Lyn Mikala Lam** announced she was taking new patients at North Hi Community Hospital, Big Island.

Sportsmen

"A few years ago, golfer **Sandy Lyle** was asked what he thought of **Tiger Woods**. "I don't know,' said Lyle, 'I haven't played there yet.' Lyle and just about everyone else, now know that Woods is a force of nature—and nurture."

Time Dec 23 '96

Miscellany

Tosh and Yosh, avid baseball players were getting old and wondered about baseball in heaven. They pledge to each other that should either one get there first, he would let the other know. Tosh got to heaven first. Tosh came to Yosh at night in a dream.

Tosh: "I have good news and bad news."
Yosh: "Well, give me the good news first."
Tosh: "Yup, there's baseball in heaven."
Yosh: "What's the bad news."
Tosh: "You are pitching tomorrow."

(As told by our favorite tennis pro, Clay Benham)

Visiting professor jokes

The following is my wife Sheila's story about why men and women are so different. We were looking for a certain restaurant and I was driving around in circles.

Sheila: "Do you know why it takes 180,000 sperms to impregnate a single egg?

It's because none of them will stop to ask directions."

A HMO director arrived at the Pearly Gates. St. Peter: "We're delighted to see you. We've followed your career carefully. Welcome to Heaven." As he opened the Gate to let the new arrival in , St. Peter added, "I'm sorry to tell you that you are granted three days only."

A farmer stood leaning on a fence at the edge of his property. He watched as a red sports car come over the top of a hill and followed the road up to the spot where he stood.

"Do you know how I can get to Route 91?" the driver asked. The farmer thought for a few seconds. Then he said, "Nope."

"Do you know where the nearest turnpike entrance is?" the driver asked.

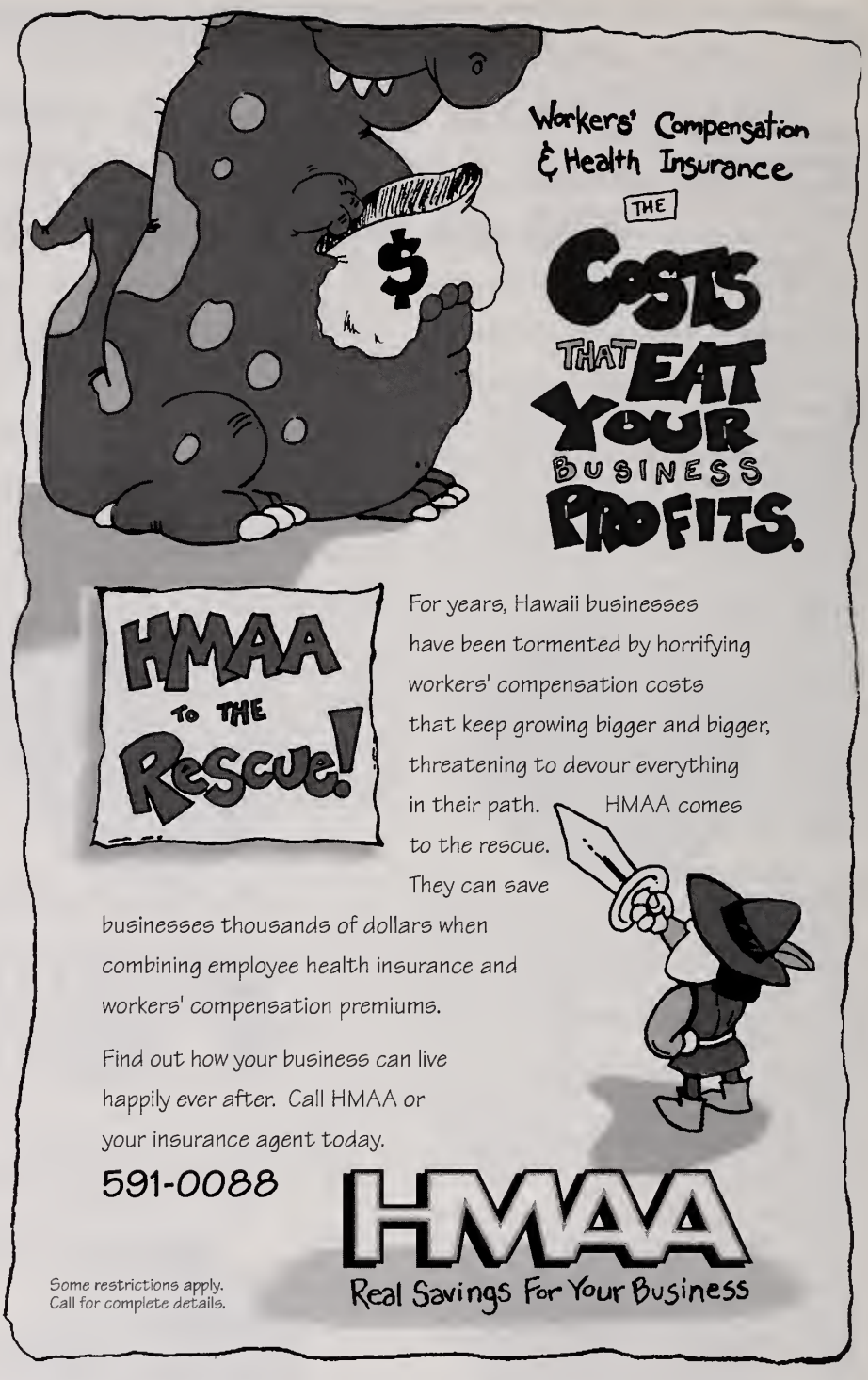
"Nope."

"How about the town of Hadley. Do you know which direction it is from here?"

"Nope."

Exaspirated, the driver raced his engine. "You don't know very much, do you?"

"Nope," the farmer said. "But I'm not lost."





Michael D. Rudy, Esq.

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HMA members.—Please send a signed and typewritten ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in *HMJ* as space is available.

Nonmembers.—Please call 536-7702 for a nonmember form. Rates are $1.50 a word with a minimum of 20 words or $30. Not commissionable. Payment must accompany written order.

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Practice for Sale.—IM; Moiliili McCully area, 1200 sq ft. Call 949-6452. 12:30-2.

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For Sale

Misc for sale.—Canon copier model 4050 $2,950; desk 60" x 30" $50.; Credenza 71" x 18" $100. Ask for Nelson 536-7702.

OB/GYN.—Office examining table. Call 955-2222.

Real Estate

Makaha Oceanfront Mansion.—6 yrs old, custom built by owner/contractor @ $925,000 cost. 4 bdrm/4 baths, swimming pool, jacuzzi, + many extras. 13,825 sq ft, fee simple lot. $635,000 or Rent-to-own. Thomas J. (Tom) Shellby (RA) 808-668-8008 (Res) 808-549-8478 (Digital) Tom Powers & Assoc., Inc. (Broker)

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Locum Tenens: Family Practice/Urgent Care.—FPBC physician available for short term Locum Tenens coverage. Please contact: Vadim Braslavsky, MD., 7800 England Dr., #101, Overland Park, Kansas 66204. Phone (913) 383-3285.

Position Available

Heavenly Hana.— Family practitioner needed to work with newly formed community-based Hana Community Health Center to create a comprehensive medical care program at the Hana Medical Center. This is an opportunity to truly make a difference is this beautiful rural community. Board certified preferred. Physicians also needed for vacation and call cover. Please direct inquiries to: Dan Omer, Hana Community Health Center, P.O. Box 807, Hana, Maui, Hawaii 96713.

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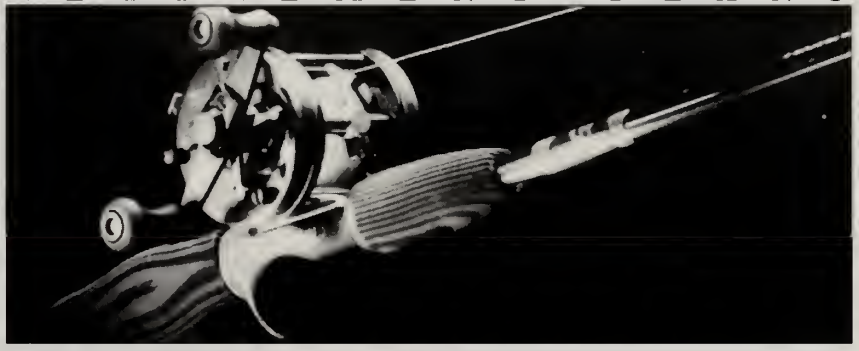
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The Weathervane

Russell T. Stodd MD

"Don't have any credit we don't care—Don't have a bank account, we don't care—don't have any assets, we don't care—don't want to pay us, that's when we care!"

(Carson as Art Fern)

Jayhawk Acceptance Corp. is a used car lender in Dallas, Texas, but now has moved from auto bodies to human bodies. It is offering financial lending packages to patients who would like elective surgery, especially cosmetic, but do not have the capital. These new lenders advertise widely and target poor risks which the bank has refused. Surgeons pay $900 to participate, and are then listed for selection by the patient. Lenders offset their risk with interest rates of 18% to 22.5% where usury laws allow. They also protect themselves by paying the surgeon 60% of the fee with the balance paid after the lender recoups its loan. Of course, there is the problem of how to repossess a blepharoplasty, nose job, or breast augmentation. How about photo-refractive keratectomy?

A little ignorance can go a long way.

A doctor in California admitted to a drug problem, he completed treatment in a rehab program, and he signed a contract, which included monitoring by the hospital. However, he refused to release drug treatment records to the board of medical examiners, and refused to undergo physical and psychiatric evaluations. The board then subpoenaed all related medical records (including peer review actions), but that request was refused on the basis of confidentiality. On appeal, a superior court sided with the board, and only the hospital records were released. Unfortunately, those who desire unlimited access to restricted records, fail to understand that peer review must be based upon confidentiality.

I am making a list of my favorite politicians. This will take some time.

Those wonderful, fun-loving, let-me-spend-your-money people we elected, do so want to practice medicine. Not content to meddle with length-of-stay, drive-by mastectomies, and late term abortions, 16 Congresspersons have introduced a measure to prohibit the use of federal funds in any way that might assist a person in committing suicide. What would we do without them?

We are all in this alone.

There are many sincere people in America who are demanding the "right to die with dignity," and the Supreme Court must consider two landmark cases addressing constitutional questions around assisted suicide. Proponents claim that all that is required is a law allowing the physician to administer a deadly drug ala Jack Kevorkian, the one-time pathologist turned executioner. The AMA House of Delegates has overwhelmingly voted against physician assisted suicide. As AMA past President Bob McAfee said, doctors are not in the business of providing death. In the Netherlands, a law was passed to permit assisted suicide, however, the intent has deteriorated. Euthanasia for those who are terminally ill has moved to euthanasia for the chronically ill, and to euthanasia for psychological distress, and then from voluntary to involuntary euthanasia. The Dutch government's own research has documented that in more than one thousand cases a year, doctors actively cause or hasten death without the patient's request. Those who claim that guidelines will be established to regulate the process, must recognize that in The Netherlands virtually every original guideline has been modified or violated with impunity.

A patriot must always be ready to defend his country from his government.

Both the President and the Republican Congress are tinkering with ideas to alter Medicare, because the present system is headed for bankruptcy. NBC and the Wall St. Journal conducted a poll of 2003 Americans in an attempt to determine what the public wants. Most people said Medicare should be protected, not reformed. A most interesting finding is that much of the public believes that there is no crisis, and as one man said, "The money is there. It's just been used for many other things." A majority rejected higher payroll taxes, and rejected any increase in beneficiary out-of-pocket costs, or an increase in age eligibility. Forty seven percent opposed reducing payments to doctors and hospitals, while 45% were in favor. Most people over age 50, rejected incentives to join HMOs, but a 60% majority favored a means-test whereby those with incomes over $40,000/year would pay more for their health coverage.

It's not the steak, it's the sizzle.

Going back to the days of President Bush and then HCFA boss, Gale Wilensky, the Administration has been trying to implement "Centers of Excellence," for cataract surgery. Now, after the failures of such pilot programs, a move is underway to include expensive inpatient procedures—joint replacement, and CABG, but not eye surgery. But the biggest insult about "Centers—" is that the term is merely HCFA spin for discounted care, and has nothing to do with excellence, or even with quality. Several things are certain about bureaucracies: among others, they do not listen, they do not care, they are very slow learners, and sadly, we must live with them.

Natural laws have no pity.

It has been said that hitting a baseball is the most difficult task in sports (ask Michael Jordan), and even the most skilled batters are successful in producing hits only 30 to 35% of the time. Not surprisingly, a study reported in the Archives of Ophthalmology found that batters who lose sharp stereopsis, quickly decay at the plate. Hitting stars of the past, George Sisler and Tony Conigliaro, and lately Kirby Puckett, all had to give up the sport when vision deteriorated in one eye. And remember Will Rogers last words to his one-eyed pilot, Wiley Post, "Wiley, you have the patch over the wrong eye!"

He may be a genius. The contrary is, of course, more probable.

A veterinary doctor was caring for a sick cow, and inserted a plastic tube in its rear to test for intestinal gas. He struck a match, and the resulting jet of flame set fire to hay bales, which in turn ignited the building and the entire farm was destroyed with damages at $80,000. The cow survived, but the poor vet was arrested and later fined $200 for irresponsibly starting the fire.

Addenda—

- Intraocular pressures read abnormally low after PRK.
- Muscles come and go; flab lasts and lasts.
- They laughed at Joan of Arc, but she went right ahead and built it.

Aloha, and keep the faith—rts ■

Do you know why doctor-owned professional liability insurance companies were created... in the first place?



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1997 marks the 12th year without a rate increase for MIEC's Hawaii physicians. This will be the ninth consecutive year of dividend credits. With these credits, long-term MIEC policyholders will pay less in 1997 than they did in 1987.

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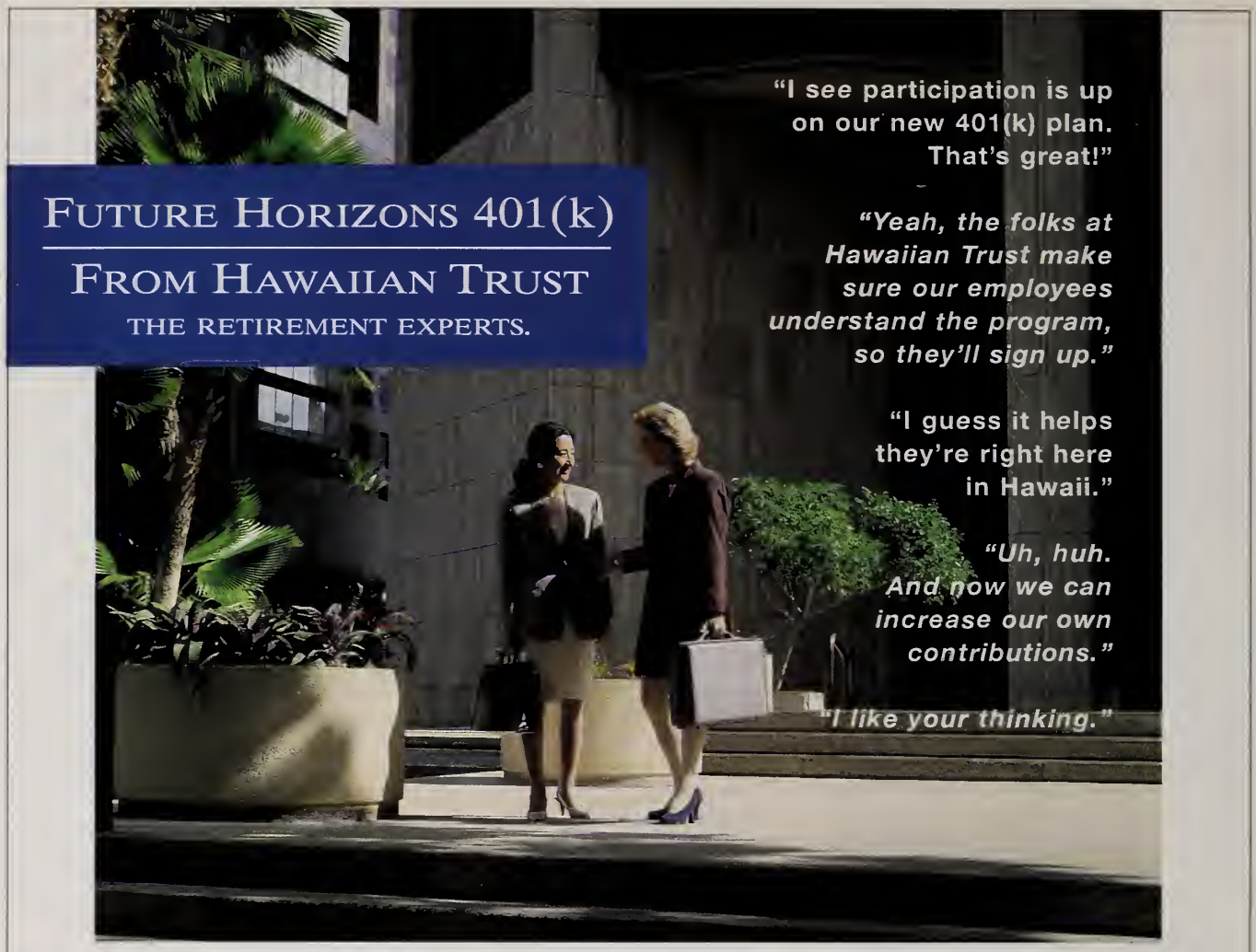
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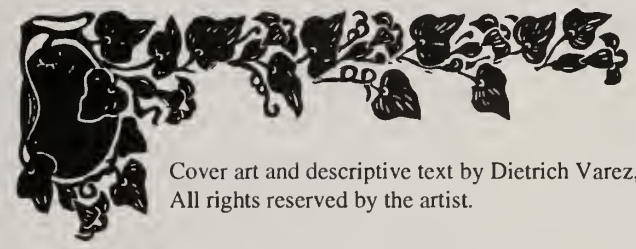
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Hawaiian Swimmers

One of the most famous swimmers in Hawaiian legend was the young thief *Iwa*. *Iwa* swam beneath the surface to steal the chief *Uni's* favorite shell octopus.



A Call to Physician Authors

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Special Guest Editorial

Federal Foolishness and Marijuana

Jerome P. Kassirer MD
Editor-in-Chief
New England Journal of Medicine

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The advanced stages of many illnesses and their treatments are often accompanied by intractable nausea, vomiting, or pain. Thousands of patients with cancer, AIDS, and other diseases report they have obtained striking relief from these devastating symptoms by smoking marijuana.[1] The alleviation of distress can be so striking that some patients and their families have been willing to risk a jail term to obtain or grow the marijuana.

Despite the desperation of these patients, within weeks after voters in Arizona and California approved propositions allowing physicians in their states to prescribe marijuana for medical indications, federal officials, including the President, the secretary of Health and Human Services, and the attorney general sprang into action. At a news conference, Secretary Donna E. Shalala gave an organ recital of the parts of the body that she asserted could be harmed by marijuana and warned of evils of its spreading use. Attorney General Janet Reno announced that physicians in any state who prescribed the drug could lose the privilege of writing prescriptions, be excluded from Medicare and Medicaid reimbursement, and even be prosecuted for a federal crime. General Barry R. McCaffrey, directory of the Office of National Drug Control Policy, reiterated his agency's position that marijuana is a dangerous drug and implied that voters in Arizona and California had been duped into voting for these propositions. He indicated that it is always possible to study the effects of any drug, including marijuana, but that the use of marijuana by seriously ill patients would require, at the least, scientifically valid research.

I believe that a federal policy that prohibits physicians from alleviating suffering by prescribing marijuana for seriously ill patients is misguided, heavy-handed, and inhumane. Marijuana may have long-term adverse effects and its use may presage serious addictions, but neither long-term side effects nor addiction is a relevant issue in such patients. It is also hypocritical to forbid physicians to prescribe marijuana while permitting them to use morphine and meperidine to relieve extreme dyspnea and pain. With both these drugs the difference between the dose that relieves symptoms and the dose that hastens death is very narrow; by contrast, there is no risk of death from smoking marijuana. To demand evidence of therapeutic efficacy is equally hypocritical. The noxious sensations that patients experience are extremely difficult to quantify in controlled experiments. What really counts for a therapy with this kind of safety margin is whether a seriously ill patient feels relief as a result of the intervention, not whether a controlled trial "proves" its efficacy.

Paradoxically, dronabinol, a drug that contains one of the active ingredients in marijuana (tetrahydrocannabinol), has been available by prescription for more than a decade. But it is difficult to titrate the therapeutic dose of this drug, and it is not widely prescribed. By contrast, smoking marijuana produces a rapid increase in the blood level of the active ingredients and is thus more likely to be therapeutic. Needless to say, new drugs such as those that inhibit the nausea associated with chemotherapy may well be more beneficial than smoking marijuana, but their comparative efficacy has never been studied.

Whatever their reasons, federal officials are out of step with the public. Dozens of states have passed laws that ease restrictions on the prescribing of marijuana by physicians, and polls consistently show that the public favors the use of marijuana for such purposes.[1] Federal authorities should rescind their prohibition of the medicinal use of marijuana for seriously ill patients and allow physicians to decide which patients to treat. The government should change marijuana's status from that of a Schedule 1 drug (considered to be potentially addictive and with no current medical use) to that of a Schedule 2 drug (potentially addictive but with some accepted medical use) and regulate it accordingly. To ensure its proper distribution and use, the government could declare itself the only agency sanctioned to provide the marijuana. I believe

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Editorial

Letter from the Editor - April 1996

Norman Goldstein MD, F.A.C.P.
Clinical Professor, Medicine (Dermatology)
John A. Burns School of Medicine
University of Hawaii

Many thanks to members and nonmember readers of the Journal who sent in these Letters to the Editor.

Since our publication of the Special Issue on Death and Dying (December 1996), I continue to receive concerned letters. Never in the 56-year history of our Journal have we received so many letters on one subject. Please do continue to send those letter on D.A.D.D.-Doctor-Assisted Death with Dignity. All letters will be published with the approval of the writer - anonymously if you wish.

As A.A. "Bud" Smyser, a valuable member of our Governor's Blue-Ribbon Panel on Living and Dying with Dignity, stated in his "Hawaii World" (*Honolulu Star-Bulletin*, March 6, 1997): "I hope we and the community can retain our civility as we debate."

April is Donor Family Decision Month

April is "*Donor Family Decision Month*" in Hawaii proclaimed by Governor Ben Cayetano on March 25.

The Organ Donor Center of Hawaii wants to encourage families to discuss the option of organ, tissue and eye donation amongst themselves, and then to decide what their future actions will be and to make that commitment during the month of April.

Elliot I. Alvarado, the Executive Director of the Organ Center of Hawaii has submitted the following article for our Journal. His wife Peggy Strieper MD is a pediatric cardiologist.

Every physician should read his article and participate personally and with family members and promote the Organ Donor Center via our offices. Call the center at 599-7630 for information.

Letters to the Editor

Congratulations on publishing an excellent *HMJ* on issues of Death and Dying. There are many issues that do not have right or wrong answers (my opinion). My position is to offer medication to control pain, even if it increases the risk of lethal side effects.

I have problems with passing a law to assist patient suicide. I am not concerned about the ethical doctor, the ethical patient and the patient's ethical family. I am concerned when any in the above group are "slipshod" and only wish to resolve their personal problem immediately.

For example, my mother had a stroke at age 91 years. For months, it appeared the end was imminent for her. She is now nearly completely recovered, and at age 95 is still coherent and enjoys her friends.

Carl W. Lehman MD

Regardless of how warmly and fuzzily doctor-assisted suicide is clothed by its proponents, it is still murder and against every ethical and moral component of physician training (not to mention the commandment of our Maker).

I am constantly amazed that physicians who can assist in childbirth and the saving of human life, can support the killing of that same human being in later years. It will be a sad day in medicine if doctors are looked on as killers (I'll not mince words) rather than healers.

William F. Moore, Jr. MD

I was pleased to read in the *Hawaii Medical Journal* about the Blue Ribbon Panel to study the issue of Death with Dignity. The special edition of the Journal which you edited on Death with Dignity was a great contribution. Congratulations on an outstanding job! It is unfortunate the AMA has taken such a reactionary stance. Hopefully, Hawaii can eventually move ahead with legislation that will address this issue.

Byron A. Eliashof MD

I would like to congratulate you on the excellent Death and Dying issue of the *Hawaii Medical Journal*. It is about time that the medical profession begin to talk honestly about this subject. Good doctors have quietly helped suffering patients end their lives to relieve suffering since the beginning of our profession. The pronouncements of the American Medical Association on this issue are essentially political. Keep up the good work. Thanks to the Hemlock Society Ad in the *Journal*, I have been able to make contact with the Hawaii organization.

William B. Wenner MD

"Death has two sides. The good one is physical death, when breathing or the heart stops. Spiritual death, when part of the nervous system withers and a person becomes a memory, is especially bad if it occurs years ahead of physical death. It is a feature of old age and sometimes middle-age if a rogue gene is present. Its hallmark is microscopic amyloid plaques, headstones on the graves of dead nerve cells and


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fibers of the brain. The loss of brain functions creates a long ghoulish existence entirely dependent on the continuous administrations of others (a nursing home gold mine). It is called senile dementia and is the certain fate of everyone who lives long enough.

If the present, common, and really criminal practice of life support to and withholding physical death for years from the spiritually dead continues, they may reach a number high enough to compose an American version of the Nazi holocaust. Its theme being horrid living instead of brutal slaughter. It could supplant the Nazi debacle as history's biggest and worst crime.

Euthanasia must be legalized and again become standard medical practice. Give man the break he gives his beloved pets."

Editor's Comment:

The above letter was submitted to the Editor of the Honolulu Star-Bulletin by Paul W. Gebauer MD. A shortened version was published on February 12, 1997.

Dr Gebauer was kind enough to forward his entire letter to me and appears above. He continues his comments in his letter to me:

Thank you for the *Journal* (December 1996 Special issue), I feel the day will come when there are 10 million spiritually dead housed in American nursing homes, kept alive with tube feedings etc., at a cost of more than a billion dollars a day and causing even more broken hearts and pocketbooks. Public outcry will then force new legislation that says, "If he won't swallow, don't feed him."

Paul W. Gebauer MD

The initial *Hawaii Medical Journal* issue on Death and Dying, though weighted in favor of assisted suicide/euthanasia, at least gave some semblance of presenting the other side, presumably to engender real and open discussion. The present second *Journal* issue on the subject makes no attempt-to-provide a balanced discussion , and, in fact, contains what I believe to be a rather inflammatory article ("Voluntary Euthanasia in the North Territory - Australia ") which appears to demean and belittle those who oppose assisted suicide by suggesting that opponents must be religious zealots or else lacking in compassion.

There is one paragraph in Dr Russell T. Stodd's "Weathervane" which does support the "slippery-slope" argument so disparaged by doctor assisted suicide advocates. Unfortunately, there is no reference to this paragraph to indicate that there is a contrary viewpoint.

The *Hawaii Medical Journal* is published under the auspices of the Hawaii Medical Association. Most of organized medicine is opposed to doctor assisted suicide. I believe it is a disservice to those who would like a fair and impartial presentation of this very emotionally charged and ethically important subject to be so heavily weighted with the views of the Hemlock Society, and others who advocate doctor assisted suicide.

That being said, I thank you for providing the leadership and devoting the time and effort to publish the *Hawaii Medical Journal.*

Ann B. Catts MD

Continued on Page 100

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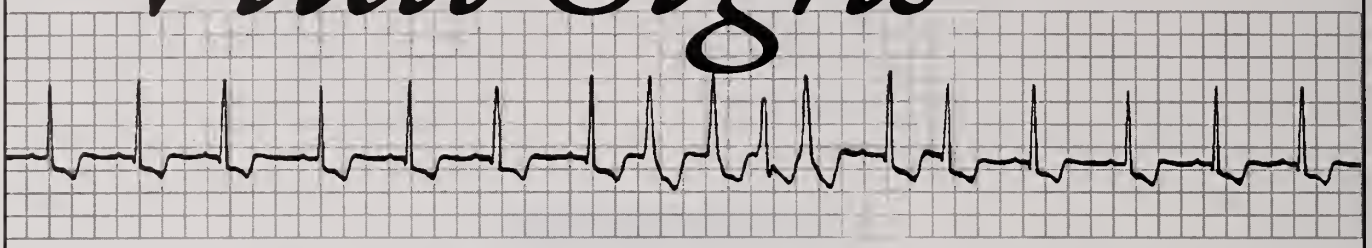
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Medical School Hotline

The Integration of Clinical Skills and Clinical Anatomy in Medical Education

Richard T. Kasuya MD, Marita Nelson Ph.D. and John Melish MD, University of Hawaii John A. Burns School of Medicine

The University of Hawaii John A. Burns School of Medicine has anticipated and is meeting the needs of future physicians in a constantly evolving, challenging environment. In 1992, the Robert Wood Johnson Foundation Commission on Medical Education recommended that medical schools integrate basic and clinical science instruction and evaluation as one of five recommendations for medical education.[1] JABSOM responded to this call for improved integration by designing a new course combining introductory clinical skills and clinical anatomy for the first-year curriculum. The primary goal was for students to develop an understanding of clinical anatomy in the context of the basic physical examination sequence and diagnostic imaging. Other goals include learning the components of the problem-oriented medical record, medical interviewing and effective physician-patient communication.

The course is 14 weeks in length at the beginning of the first-year, with 6-8 hours of structured activity per week. This time is divided between large group interactive demonstrations, dissections in the anatomy laboratory, and supervised practice of clinical skills. Six afternoons are reserved for direct patient interactions under the supervision of faculty and volunteer physicians throughout the community. Students interview and examine select patients, discuss and review pertinent clinical data, and receive feedback on their interview, physical examination and communication skills. Additionally, supplemental self-directed resources including videotapes, computer-based learning, self-study lab modules, and recommended readings are incorporated into the curriculum.

The organization and sequencing of the course follow closely the sequence of the basic physical examination, as do the tutorial health care problems that are studied concurrently and serve as the foundation of the medical school's problem-based learning (PBL) curriculum. For example, when students are focusing on the basic clinical skills, clinical anatomy and diagnostic imaging of the heart and vascular system, they are concurrently working through a health care problem on acute myocardial infarction in their tutorial sessions. The following week, the focus shifts to the clinical skills, clinical anatomy and imaging of the abdomen, and the related tutorial case covers acute viral hepatitis.

As the first semester of the curriculum is designed as an introduction to the skills necessary for efficient and effective problem solving, the health care problems, clinical skills and clinical anatomy are presented as an introduction to topics that will be re-visited in depth later in the curriculum.

Students are required to pass an integrated laboratory examination, attend and satisfactorily complete all assigned course activities. They also complete entry and exit questionnaires that assess their appreciation of the value of, and interrelationships between, the various components of the course. The results of these questionnaires have indicated that students felt an improvement in their understanding of clinical anatomy, clinical skills, elements of a strong physician-patient relationship, diagnostic imaging and human sexuality ($p<0.05$). Their perception of the importance of each component was high both before and after the experience. Written feedback from clinical preceptors indicated that students were able to apply the materials from this course to their patient care experiences. Feedback from tutors in subsequent units indicates that students are better prepared in anatomy and imaging aspects of health care problems than previously.

It is emphasized that this course represents a beginning of a continuum of learning experiences that span the four years of medical student education at JABSOM. Clinical skills laboratories and preceptorship experiences continue weekly through the first two years of the curriculum as a prelude to the more traditional clinical clerkships of the third and fourth years. Supplemental to actual patient care experiences, standardized patients and videotaped exercises are utilized throughout the curriculum for both learning and evaluation. Similarly, this course represents the first of many opportunities for students to learn anatomy and imaging. Elective experiences in clinical anatomy are offered throughout the curriculum, and continue to be emphasized in health care problems and clinical clerkships. Moreover, diagnostic imaging, incorporated into health care problems throughout the first two years of training, is covered in the context of patient care in the third year clerkships and offered as an elective for senior students.

In summary, this course represents an effective integration of introductory clinical skills, clinical anatomy and imaging. Significant early patient care experience have been combined with a wide variety of other instructional strategies. Students feel that the course is valuable and satisfying, and faculty also believe that the course helps students meet the desired behavioral objectives. This integrated course serves as a model for educational collaboration between basic science and clinical teachers in the context of a problem-based learning curriculum and provides students with a solid foundation for future success as physicians.

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Telemedicine Today

James E. Hastings MD
Professor and Chair of the UH Department of Internal Medicine

Introduction

Telemedicine is a rapidly expanding technology that is one of the forces transforming our health care delivery system. It is the product that results from the marriage of improved telecommunications and automation technology applied to the problems we face in the delivery of health care. It is an innovation whose time has come and it will change the way we think of and practice our system of medicine.

History

The history of telemedicine probably began when telephones and radios were first used to allow physician-to-patient or physician-to-physician communication to address patient problems. This technology was utilized in rural parts of our country as well as with ships at sea. Its growth paralleled the development of the supporting communications technologies. There is little literature but much anecdotal information on this subject. The information tells of its success in guiding, and influencing medical care. About 1958 we find the first mention in the literature of the use of a video image applied to the physician/patient encounter. There is sporadic mention of this technology over the next decade.

In the late 1960's there were numerous demonstration projects that produced a body of knowledge that was annotated in the medical literature. This experience was funded in large part by the federal government with the National Aeronatics and Space Administration playing a very large role. The NASA medical department realized the need to explore and understand the limitations and possibilities of addressing medical problems and indeed disasters in space, a location and environment where face to face care was unavailable. These numerous demonstration projects, though useful and productive, closed when the federal funding ran out. The technology was not user friendly. The economic utility was not demonstrable to the bill payers. The communications infrastructure was not robust enough to adequately support the endeavors. Lastly, like many new ideas, there was enthusiasm for it only in the minds of a few.

A decade later, starting about 1989, a resurgence began that has continued to the present time. The technology has improved significantly, both in the telecommunications arena as well as the automation arena. Not only has the technology improved, but it is more user friendly and has penetrated deeper into society. More homes have personal computers. ATM machines have become universal. Our children play computer games daily. Telecommunications and automation have both become much larger parts of our lives. This time a much broader constituency within the federal government enthusiastically supported telemedicine by initiating many and more varied demonstration projects. Additionally, many state governments have joined in supporting telemedicine projects. Both the telecommunications utilities and the automation industry have become much more robust and presumably can see the economic potential. Both have contributed significantly to this initiative.

International

Growth of telemedicine has occurred primarily in areas with robust telecommunications infrastructure. This has been primarily the United States and Europe. Rural Norway has become a leader in the field. Individual demonstrations have occurred in most Western European countries. Long distance communications links for radiological interpretation and consultations have been demonstrated between several leading mainland US university hospital systems and countries in the Pacific rim as well as the Middle East. Some of the richer Pacific Rim countries are beginning to develop the technology. The US Military has been a leader in implementing telemedicine technology initially supporting the Armenian earthquake relief in the early 1970's and more recently in association with major troop deployments into the Caribbean and to Bosnia. Locally, Tripler Regional Medical Center has been supporting health care in the South Pacific for the past 4 years with full motion video teleconferencing and still frame visual communication to either remote or economically deprived areas of the South Pacific. Occasional contacts have been made between Tripler and military sites in Asia, the Middle East and the continental United States. One of the least heralded but most rewarding and least expensive telemedicine experiments was the linking of health care personnel in the Federated States of Micronesia, the Marshall Islands, and Palau. Physicians in these areas have been linked with still image capability over standard telephone connections. This link permitted consultations with specialists in Hawaii, consultations between local clinicians and Continuing Medical Education activities. This advance was a joint effort between Tripler Regional Medical Center, AT&T and the University of Hawaii at the Pacific Basin Medical Officers Training Program in Pohnpei State.

Growth Patterns

The introduction of the technology today usually begins with the specialties that make high use of images. Radiologists and pathologists are the usual initiators. This is true in Hawaii. The next step is teleconferencing. Following this, more sophisticated and complex interactions take place utilizing physiological data and direct discussions by the patient and provider as a part of the consultation .The initial efforts are usually point to point, between two well defined geographic locations that already are related in a significant referral pattern. Once the first two locations are established, it is much easier to build other locations. Very quickly a network is established. The initial concept is usually a wheel and spoke operation, but in many cases this has given way to a web shaped network which makes better economic use of the utility.

Bandwidth Availability

Cost of the bandwidth is a major determinant of the particular technology utilized in these projects. If the only available bandwidth is that provided via regular telephone service, then the experiment includes only voice and single frame images, EKG's,

etc. for the interaction. On the other end of the bandwidth spectrum is full motion video and several channels of data running simultaneously. This is very expensive today but broad band width provides the opportunity for the distant consultant to visualize and process as much or more information than is available if co-located with the subject. Multiple simultaneous video channels may be especially important if the consultation is a complex event such as telementoring a surgical procedure. Demonstrations of this technology have occurred locally at Tripler Regional Medical Center as well as at the Kaiser Hospital. One of the most cost effective approaches being developed is the so-called "store forward" technology where information is acquired and packaged in a computer and then forwarded to the consultant at a later time. There are versions of these store-forward systems that can include full motion video. Store -forward technology plus advanced data compression will bring much more information to the consultant without the expense of large bandwidth and without the requirement for three individuals (patient, primary physician and consultant) to be precisely located at the same point in time, as is required for real time, face to face, consultations. These differences make store-forward a more flexible alternative that is less expensive and therefore more acceptable than real-time connectivity.

Effectiveness

The experiences gained over the past three decades have shown the effectiveness of utilizing these technologies to deliver health care. Certainly, the greatest utility has been in underserved areas where access is a significant problem due to the lack of skilled personnel and time and distance separation. A great many studies have demonstrated patient and provider acceptance of this technology. Numerous examples in many specialty fields including Internal Medicine, Pediatrics, Ob/Gyn, Neurology, Psychiatry, Dermatology and many surgical specialty areas have shown successful utilization of the technology. Most of the literature is anecdotal and uncontrolled. What are not available are business case studies that demonstrate the economic utility of the technology. Further, more rigorous studies need to be undertaken to demonstrate the limits of the technologies. There is simply not enough data currently to provide this information.

Impediments to growth

A Telemedicine Policy Review Group convened by the Western Governors. Association, identified six problem areas that served as barriers to the implementation of Telemedicine. This was reported by Rashid Bashur, et al.

Problem 1— Inadequate Information Infrastructure and Uncoordinated Infrastructure. State policymakers need to understand the complimentary nature of many societal functions utilizing this technology and develop policy in support of this concept. Social services, education, police, and health departments all need a networked solution to improve their efficiency - and it can be the same solution.

Problem 2—Regulatory Distortions, Limitations on Competition and Fragmented Demand for Telemedicine Services. As most telemedicine is developing in rural areas with limited availability of communication companies, there is little competition to drive down communication prices. We will have adequate competition within the borders of Hawaii. Our problem occurs when we apply this technology to the rest of our Pacific constituents.

Problem 3—Restrictive Reimbursement Policies for Telemedicine Services in the Public and Private Sectors. This is a major issue for the survival and growth of this technology. Third party payers need to be educated about the benefits of increased access to care and ultimately of diminished cost.

Problem 4—Restrictive Physician Interstate Licensing and Intrastate Credentialing. States are grappling with this issue now and the trend is to require some special licensing for practice in another state. This will be an increased expense to the system and will restrict the growth of the technology.

Problem 5—Malpractice Liability Associated with Telemedicine. This issue has not been tested in the courts as yet.

Problem 6—Confidentiality of Patient Information. This is a major concern and adequate safeguards need to be built in.

Future directions

Future development is going to be determined by a complex interrelationship of capital availability and solutions to the impediments listed above. Most importantly, though, this technology is becoming more universal and accepted by both providers and patients. It will grow. The issue is how fast and where. Most of the literature and demonstrations to date have focused on sites characterized by their physical remoteness because of great distance or time differences. Very little effort has looked at how this technology will effect the more usual practice of medicine in urban areas. My suspicion is that this is ultimately where the technology will have its greatest impact. The ubiquitous television will become part of a bi-directional communication system of high band width. The "electronic house call" is not a remote concept. The ability to improve access for all patients is a real possibility. There are several experiments that have been federally funded that are looking at the utilization of various forms of teletechnology utilization directed at not geographically remote recipients, but focused instead on local individuals who for a variety of reasons make high use of the health care system. If these studies prove successful and are able to decrease clinic or ER visits and prevent hospital admissions, perhaps the third party payers will support the development of the technology and the bill payers will demand it. In the meantime, high band width technology will continue to grow in availability and decrease in cost so that more experiments with the technology can be undertaken.

Conclusions

Telemedicine, after a halting start, has now become a part of our health care system and will only grow over the next several years. It will have a major impact on the way health care is delivered. In so doing it will significantly increase access to care for many people. There are a number of impediments in our system that will slow its growth and may influence and divert its development. Cost remains a major issue influencing the development of the technology and we may need to wait until another approach to financing health care is available. Under our current system of fee for service reimbursement, the economic disincentive to developing this technology is significant. Countering this will be the demands of our patients for the increased access and quality this technology offers.

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The Birth of the RCMI Clinical Research Center is a Joint Venture of the University of Hawaii and Kapiolani Health

Carol Trockman MS*, Susan Pelke RN*, Harry Skidmore MSW**,
Fred Greenwood DSc***, David Easa MD*

Hawaii established a Clinical Research Center with collaboration from the University of Hawaii Pacific Biomedical Research Center, the John A. Burns School of Medicine and Kapiolani Health via a five year award from the Research Centers in Minority Institutions of the National Institutes of Health. Support offered includes consultative services for protocol design; epidemiological and biostatistical analysis; design of study forms; and data and specimen collection and analysis.

Introduction

For the first time in the history of its medical community, Hawaii has established a Clinical Research Center (CRC). This facility, located at the Kapiolani Medical Center for Women and Children (KMCWC) campus, was a collaborative effort by three community forces. These included the Pacific Biomedical Research Center (PBRC) and the John Burns School of Medicine, both located at the University of Hawaii at Manoa (UHM), and Kapiolani Health.

The Clinical Research Center resulted from a five year grant awarded by the Research Centers in Minority Institutions (RCMI) beginning October 1995. The RCMI, which has a mandate to foster development of clinical research through the establishment of administrative and clinical research infrastructure in designated minority centers, is part of the National Institutes of Health (NIH). These centers are similar to the General Clinical Research Centers (GCRCs) funded in over seventy major mainland academic centers for some 30 years. The difference is that the criteria and funding levels for awards to minority institution Clinical Research Center grants are tailored to provide a stimulus to clinical research. General Clinical Research Centers are generally housed at institutions already with state of the art technology, and have investigators of national and/or international status. There was much more inpatient research thirty years ago. That fact coupled with concerns over expanding health care costs and the transition to managed care have directed the current trend toward outpatient research. Thus, the Clinical Research Center may be the only way for clinical research to survive the health care cost crunch of the 1990's.

In any case, the Clinical Research Center is the first opportunity for the State of Hawaii to provide a mechanism for our multi-ethnic population to participate in clinical research studies that address its health care concerns. Support offered Hawaii investigators through the Clinical Research Center includes consultative services for protocol design, epidemiological and biostatistical analysis, design of case report forms, assistance with treatment protocols, data collection, specimen collection and analysis, as well as data entry and analysis. The purpose of this report is to inform the Hawaii medical community about this new center as well as to review the activities of the first year.

Purpose

The specific purpose of the Clinical Research Center is to cultivate the development of high quality clinical research in the State of Hawaii, with a major goal being the growth of diverse clinical studies significant to health care issues of minority populations, and to stimulate interest and development of research expertise in junior and, particularly, minority investigators. The vision is to promote clinical research activities in our community and to encourage applications from all health care facilities and providers in Hawaii. The success of the center may lead to future grants from the National Institutes of Health and other agencies, as well as continued core support for the Clinical Research Center, thereby firmly establishing the Clinical Research Center as a community resource.

A centralized facility such as the Clinical Research Center was needed given the scattered nature of existing clinical and basic research activities in the community and the limited number of institutions involved in clinical and basic research. A "Consortium for Biomedical Research" was set up to bring together the institutions involved in biomedical research at the initiative of Dr Sally A. Myers, The Queen's Medical Center, to foster collaboration and sharing of state resources. The University of Hawaii at Manoa is one of these institutions through its John A. Burns School of Medicine and two of its Organized Research Institutes - Pacific Biomedical Research Center and the Cancer Research Center of Hawaii. The other institutions involved with research include the medical centers located in the major private, non-profit, community hospitals affiliated with the Medical School - Kapiolani Medical Centers, St.

Clinical Research Center*
Kapiolani Medical Center for Women and Children
1319 Punahou Street
Bingham Building
Honolulu, Hawaii 96826

Kapiolani Health Research Institute**
Kapiolani Medical Center for Women and Children

Pacific Biomedical Research Institute***
University of Hawaii at Manoa

Please address correspondence to:
David Easa MD
1319 Punahou Street
Honolulu, Hawaii 96826

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Francis Medical Center, Kuakini Medical Center, The Queen's Medical Center and Tripler Army Medical Center (TAMC). A goal of the Clinical Research Center is to avoid duplication, since the center not only serves the existing limited cadre of clinical researchers but also increases the critical mass by providing linkages between these and the basic researchers located predominantly on the Manoa campus. To bridge this gap, Kapiolani Medical Center for Women and Children has provided a central location with space on the hospital campus as well as matching pilot project seed monies, infrastructure support and clinical staff expertise.

From Proposal to Reality

Initially, the Clinical Research Center was to be housed in the Kapiolani Women's Center, a free standing facility several blocks from the hospital campus. However, after considerable administrative discussion, the Clinical Research Center was relocated to the hospital campus as it is much more convenient for investigators and staff and closer to hospital resources as required. With planned renovations successfully completed, the area measures 3500 square feet and consists of four patient exam rooms, a patient waiting area, a reception area, a storage and processing laboratory, a conference room, office space for all staff, and a storage area. However, although the Clinical Research Center was funded by the National Institutes of Health Research Centers in Minority Institutions program as of October 4, 1995, it took several more months before official notification was received, allowing appropriate organizational and administrative structures to be implemented to birth the center. Hiring of research personnel was a time consuming process due to funding concerns and constraints, as well as the limited availability of qualified research personnel in our small community.

Our staff of eleven is comprised of a Program Director, David Easa, MD; Program Coordinator, Susan Pelke, RN; three research nurses; an epidemiologist; a computer specialist; a laboratory assistant; an administrative secretary; a grants specialist; and a biostatistician. The current staff of experienced nurses and other research personnel resulted from not only an evaluation of qualifications and experience, but also an appreciation of personality traits that would foster the teamwork and collegiality necessary in creating an appropriate research infrastructure environment. It was also clear the research personnel hired for the Clinical Research Center were appropriately committed to the Research Centers in Minorities Institutions' goal of fostering quality clinical investigation into the health problems of minorities. In that regard, the research staff currently consists of an ethnic mixture of two Asian females, one Filipino female, one Filipino/Portuguese female, one Japanese/Caucasian male, three Caucasians females and three Caucasian males.

The extraordinary amount of time needed to assist potential investigators with protocol development was unanticipated. While many are experienced clinicians and/or specialists, few are adept at the research process. Because coaching of inexperienced investigators is a major goal of the program, many hours have been spent by the Program Director, Program Coordinator and staff in guiding potential investigators and revising protocols, thereby delaying actual protocol implementation.

Another unexpected, time-consuming and cumbersome situation is the current requirement for each protocol supported by our Clinical Research Center to be approved by at least two Institutional Review Boards (IRB). These bodies approve all studies to insure human subjects protection. Because University of Hawaii at Manoa is administratively responsible for Clinical Research Center activities yet research subjects are seen on the Kapiolani Medical Center for Women and Children campus, both the Kapiolani Medical Center Institutional Review Committee and the University of Hawaii Committee on Human Studies must approve Clinical Research Center protocols. In an effort to ease this situation, Clinical Research Center stimulated discussions are progressing toward acceptance by the University's Committee on Human Studies to accept, without a second review, the recommendations of the Kapiolani Institutional Review Committee.

The Clinical Research Center's Scientific Advisory Committee (SAC) was established as the official source of review for scientific merit for potential Clinical Research Center protocols. Patricia L. Blanchette, MD, MPH, Director of the Division of Geriatric Medicine, University of Hawaii at Manoa School of Medicine, currently chairs the committee. In addition, representatives from each of the major hospitals of the community sit on the committee. Several institutions, including Kapiolani Medical Center for Women and Children, Pacific Biomedical Research Center, the Cancer Research Center, and the University of Hawaii at Manoa School of Medicine, have provided more than one member. The organization and construction of such a committee of clinical and basic science scholars committed to the Clinical Research Center was a long and laborious process, but one that forged a formidable group, displaying enthusiasm, expertise, and comprising some of the best clinical researchers in the community. To date, 16 projects have been approved and funded. These projects represent researchers affiliated with various institutions including Kapiolani Medical Center for Women and Children, Leahi Hospital, Pacific Biomedical Research Center, Queen's Medical Center, the Cancer Research Center, Tripler Army Medical Center, University of Hawaii at Manoa, and private physicians.

Research Environment

To support professional growth and development, our biostatistician has already conducted two consecutive six hour courses in biostatistics for our staff, current and potential investigators throughout the community as well as medical center and University of Hawaii at Manoa personnel. The course was co-sponsored by the Clinical Research Center and Kapiolani Health Resource Institute (KHRI) and is in keeping with our educational goals to foster research expertise for inexperienced investigators. Another Kapiolani-sponsored conference entitled "Protecting the Rights of Human Subjects in Research," was presented this summer and added to the expertise of community investigators involved or planning research with human subjects. Additional courses in epidemiology and other basic research topics are currently being planned.

Invitation to the Community

To advertise and encourage applications from community centers, the Program Director and Program Coordinator attended regularly scheduled Institutional Review Board meetings of each community hospital, presenting an overview of the Clinical Research Center and explaining the type and extent of support that may be possible for each institution or individual investigator. Originally, applications from hospitals other than Kapiolani Medical Center for Women and Children were limited, but there was a great desire to support clinical research studies proposed by investigators from other hospitals. This may expand the number and type of clinical research studies performed in the Clinical Research Center.

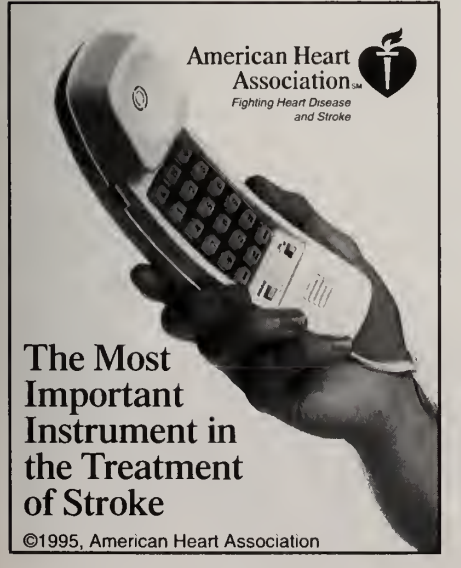
Since the Clinical Research Center has been funded for sixteen months, it is early yet to measure its impact on institutional development. As Clinical Research Center activities intensify over the next several years, a greater number of collaborations will be possible between institutions in the community, between the University and community hospitals, and between basic scientists and

clinicians. Investigator initiated research projects or RO1 awards are the primary research award from the National Institutes of Health for clinical and basic researchers. As these RO1 awards become more difficult to obtain, it becomes all the more important to combine the expertise and ability of basic scientists with clinical scientists to expand the focus and depth of any clinical research study with potential for meaningful data so a reasonable chance of being funded is possible in the future. We believe the central location for this collaboration should and will be in the Clinical Research Center.

Summary

For the first time, the State of Hawaii has a clinical research center to meet the health needs of its multi-ethnic population who are distanced from clinical research centers on the mainland. Major benefits of utilizing Clinical Research Center services are sharing expertise of the Clinical Research Center staff with potential investigators and expediting implementation of clinical studies. In short, the Clinical Research Center has brought about an opportunity for unlimited collaboration and cooperation between community resources to maximize the clinical research potential for the State of Hawaii and its people.

The Clinical Research Center is actively encouraging the submission of new protocols. Interested investigators are encouraged to call the Clinical Research Center at 973-5242 for additional information. Assistance is available with protocol design, as well as application submission, dates for Scientific Advisory Committee and Institutional Review Boards meetings. Help with other aspects of clinical research protocols development such as input by an epidemiologist and biostatistician, design of data collection forms, data collection, specimen collection and analysis, and data entry and analysis are also available.



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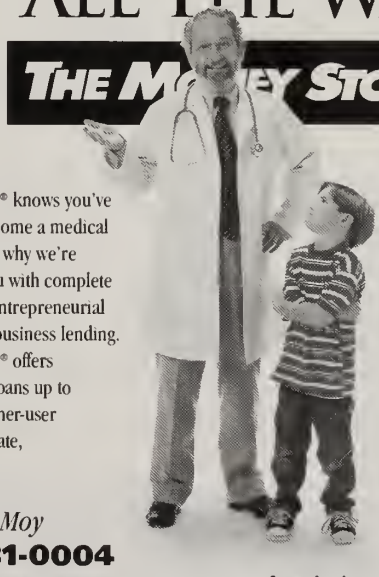
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The Role of the Physician in the Organ Donation Process

Elliott I. Alvarado, Executive Director, Organ Donor Center of Hawaii

For obvious reasons, physicians have had a major role in the organ donation process in Hawaii. Starting from the recovery and transplantation of kidneys in the early 1960's by Dr Livingston Wong and continuing in 1987 with the formation of the organ procurement organization to serve the state of Hawaii independently of hospital affiliation, physicians such as Dr Wong have been instrumental in the organ donation process. Today, the organization that Dr Wong helped to establish is known as the Organ Donor Center of Hawaii and in September 1997 it will celebrate ten years of service.

Starting with a part-time staff and an occasional organ donor, the organization now has a half dozen full-time staff with several part-time staff to manage the recoveries of 12 organ donors annually. The scope of annual activities for the organization has broadened to include 18 tissue donors and over 60 eye donors (in collaboration with the Hawaii Lions Club Eye Bank).

The role of the physician continues to be pivotal in this process. For example, the physician has the responsibility to declare death and inform the family. For a doctor trained to save lives, losing a patient is often an emotional defeat. It is at this point, where medicine can offer no further hope for the family, that the physician must open a door of opportunity for the surviving family. The "continuum of care" has progressed from patient to family and the doctor has an important role to play. Just when there is nothing else left to offer but sympathy, the physician can offer the family one more option. The family has the final option, a final choice that only they can make for the deceased patient, the option of donation.

While doctors are very well-trained in a variety of disciplines and specialties, the role of approaching the family for consent must go to a trained facilitator. Studies have documented the greater success of trained personnel to secure consent from potential donor families than physicians are able to obtain. These facilitators may be an Organ Donor Center coordinator or a "designated requestor" at a hospital who has been specially trained to approach bereaved families. Approaching a family without training may even expose the facilitator to some legal liability.

The opportunity to exercise the "right" of donation is one that cannot be denied to a surviving family. Some medical professionals, acting on what they thought were the family's best interests, have failed to present the option of donation and have found themselves in lawsuits.

While all the cases have been settled out-of-court, it is obvious that hospital staff and physicians should refer all deceased or potential donors to the organ procurement organization for disposition. Of course, many patients will fail to meet the medical criteria for acceptability. But those criteria change with time and formerly unacceptable potential donors from a few years ago are routinely accepted today. The Organ Donor Center provides a valuable insulating service to physicians by acting as the referral organization that accepts or declines a potential donor. The doctor never has to make a decision regarding acceptability and will never have to deny the donation option to a surviving family.

Since 1987, the Organ Donor Center of Hawaii has facilitated the recoveries of almost 200 organ and tissue donors. The families of those donors made important decisions to share the lives of their deceased and thus spare the loss of life, or the loss of the quality of life, for another family. Like the recipient families, donor families have benefited from donation as well because they are able to find meaning in their personal and tragic loss. Typical of what donor families feel is this statement from a donor mom, "He donated everything. Knowing how many people he helped has really been a comfort to us. It is possible to bring some good out of death. Our loved ones are lost to us for now, but we will see them again. His name will go on and on in a positive way."

Physicians were part of that donation process and they will continue to have an important role in the donation process in the future by (1) declaring death, (2) informing the family and (3) leaving the option of donation open.



"YEAH HONEY, I THINK YOU COULD STAND TO LOSE FIFTEEN POUNDS"

SOME THINGS YOU WOULD NEVER SAY TO A FAMILY MEMBER. EVER. BUT HERE'S ONE THING YOU ABSOLUTELY SHOULD: IF YOU'VE DECIDED TO BECOME AN ORGAN AND TISSUE DONOR, PLEASE, TELL YOUR LOVED ONES. BECAUSE YOU CAN'T BE AN ORGAN DONOR—EVEN IF YOU'VE SIGNED SOMETHING— UNLESS YOUR FAMILY KNOWS. ONLY THEN CAN THEY CARRY OUT YOUR WISHES.

Organ Donor Center
of Hawaii

CALL 599-7630 FOR MORE INFORMATION.

SHARE YOUR LIFE.
SHARE YOUR DECISION.

Council Highlights

March 7, 1997
Roger Kimura MD, Secretary

The meeting was called to order by Dr Spangler, President at 5:38 pm.

Those present were Drs L. Howard, Treasurer; C. Lehman, Immediate Past-President; AMA Delegates: C. Kam, A. Kunimoto; Alternate AMA Delegate: F. Holschuh, S. Wallach; Speaker: H.K.W. Chinn, Vice-Speaker: P. Blanchette; County Presidents: W. Dang, Jr., Honolulu; J. Betwee, Maui; G. McKenna, Kauai; A. Bairos - W. Chang, W. Dang, G. Goto, J. Lumeng, J. McDonnell, R. Stodd; Young Physician Delegate: G. Caputy; HMA Alliance: C. Gutteling

HMA Staff: J. Won, B. Kendro, J. Asato, P. Kawamoto, A. Rogness - recording secretary.

Minutes: The minutes of the January 10, 1997 meeting were approved as circulated.

- Dr Spangler reported: 1) that the Hilo community is honoring retired Senator Richard Matsuura on March 9 and that he and other physicians from HMA will attend. The HMA will present him with a letter of commendation and a plaque. 2) The special House of Delegates will be meeting on April 5 at 12:30 at the HMA office to receive the Reorganization Task Force's report. There will be no Council meeting in April; 3) He received a letter from the U.S. Dept. of Health and Human Services stating that there is no scientific data that marijuana is a safe and effective drug in treating patients.
- Mrs Gutteling reported on the Doctors' Day Ball which will be held on March 29th and encouraged physicians to attend. The proceeds will go to the AMA-ERF, UH John A. Burns School of Medicine. The Alliance will once again take out a two page ad in the newspaper in honor of Doctors' Day. There will be a proclamation signing for Doctors' Day with the Governor and Mayor. The Presidents of the HMA and HCMS are invited to attend the signing. The Alliance also thanked Council for the $3,500 given to them in support of their projects. The Alliance reported 104 registered and paid members. The membership dues is $50. Physicians are encouraged to have their spouses join. Council gave the Alliance a round of applause for their hard work on behalf of physicians.

For Action

- Council approved the payment of OSMAP dues in the amount of $200 and the AMA Federation dues in the amount of $750.
- Council approved Finance Factors mortgage package as a benefit to members and will announce it in the newsletter.
- Council agreed that the HMA do its own directory of physicians in-house.
- Council approved the Finance Committee's recommendation to stay with SEI as the portfolio managers for the HMA Employees Retirement Plan.
- Council approved the Tobacco Task Force's recommendation to put HMA's logo on the anti-Tobacco posters which are to be distributed to physician offices and 3rd and 4th grade classrooms in the State.
- Council approved the Annual Meeting Committee's recommendations 1 - 6 for the exhibit booth fee, exhibit fee booth waiver with support of the scientific program, speaker honorarium, registration fees, proposed 1997 budget and to allow a pharmaceutical company to produce tote bags with HMA's logo on it.
- Council approved the Public Relations Committee's recommendation that the Distinguished Medical reporting awards be presented at the June 6 Council meeting to which only the winners and their bosses would be invited.
- Council approved the Executive Committee's recommendation to send out the Dept. of Health Diabetes Control Program's corrected Survey to physicians in the state at little or no cost to the HMA.
- Council passed a motion that HMA's Counsel contact the Regulated Industries Complaints Office to discuss changing the language of the reports on physicians given out to the public.

Component Society Reports

Kauai.—Dr G. McKenna reported that Kauai County Medical Society met in January and he was elected the new President. They are considering a public relations campaign on the island where physicians in the society would write articles or volunteer to give talks on local radio or T.V. identifying themselves as Kauai County members. They want to increase the publics knowledge on issues facing them, such as managed care, etc.

Honolulu.—Dr W. Dang, Jr. reported that Honolulu County had their first county society meeting where Susan Chandler did a presentation on the QUEST program. Representatives from all the provider plans attended and there was an interesting exchange of questions. The next county society meeting will be in April where Keith Kamita from the local DEA office will talk about the pressures on physicians.

Hawaii.—Dr Spangler reported for Dr L. Sonoda-Fogel that their county society had their first meeting on February 6. With the help of the Alliance, the previous scholarship program will be reinitiated. They will be having another summer family picnic and hope to recruit new members.

Maui.—Dr J. Betwee reported that their county society will also be having a meeting with Keith Kamita from the local DEA office and David Karp of M.I.E.C. in May. They will also be having a joint-sponsored CME venture with Parke-Davis on Diabetes.

For Information

Health and Fitness Expo.—The anti-smoking character "The Extinguisher" from the AMA was enjoyed by both children and adults at the expo. Dr Holschuh complimented Mr Jon Won and the Tobacco Task Force for their work at the Expo.

Legislative Committee.—At this point in time it is not sure what will come out of the No-Fault bill. Dr Wallach met with Keith Kamita of the local DEA office regarding certain drugs and their classification. Dr Howard reported that there are 128 active bills that involve medicine that HMA is watching, such as early intervention, volunteer services, elderly care, controlled substances, etc.

Physicians Accessing the Internet.—This is a hands-on course which will be held on Saturday, April 19. There will be two sessions. Session 1 from 8:00 - 12:15 and Session 2 from 1 pm. - 5:15 pm. HMA member is $35, Nonmember $110.

HMSA Pilot Project.—Dr Lehman reported that this is a pilot project to reward physicians who are fee for service for various contributions. Two physicians represent HMA on this project, Drs C. Lehman and J. Lumeng. It was questioned that if participating in this program is measuring quality of care. It was felt that the project is looking more at cost effectiveness which may reduce utilization of services. Drs Lehman and Lumeng will continue to attend the meetings and monitor the project.

MIEC.—A deductible program for professional liability through MIEC's Claremont Liability Insurance Company will be available in the near future. Informational sessions will be held. This program will be available to MIEC policyholders and nonpolicyholders, HMA members or nonmembers.

Special Report of the HMA Nominating Committee.—Dr Stodd reported that the Nominating Committee met just before Council. The Montana-Wyoming PRO board requires that they have 8 members from Hawaii on their PRO board (6 members of the HMA and 2 nonmembers) It was directed by the Executive Committee that the Nominating Committee select the members. The Committee nominated physicians from the neighbor island and Honolulu who have experience in evaluating medical quality of care. The slate is as follows: One Year Terms: Drs Sakae Uehara and Geoffrey Galbraith; Two year terms: Stephen Wallach, Paul Esaki and John Berthiaume; Three year terms: Frederick Holschuh, Joe Palmer and Stephen Kemble.

Labeling of Prescriptions.—Dr Howard received a letter from Senator Cal Kawamoto kindly asking him to remind physicians about compliance with the prescription labeling law. Physicians must ask their patients if they want their diagnosis labeled on the prescription. It was felt by Council that the symptom not the diagnosis should be placed on the label. Dr Howard will discuss this with Senator Kawamoto.

Meeting was adjourned at 8:15 p.m.

News and Notes

Henry N. Yokoyama MD

Life in These Parts

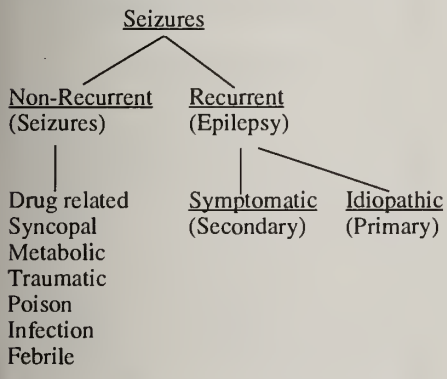
Conference Notes

"Neuroscience advances & the Gamma- Aminobutyric acid (GABA) Receptor"

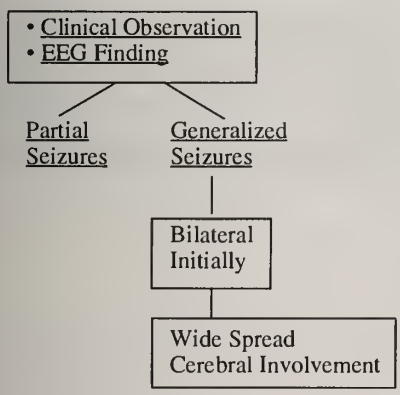
Visiting professor James A. Ferrendelli MD, Professor and Chairman, Department of Neurology, University of Texas—Queen's Medical Center, Friday morning conference, January 24, 1997.

I. Epilepsy

A. General Discussion: Seizures vs Epilepsy



B. Classification of Epileptic Seizures (International Classification)



C. Diagnosis of Seizures:

- History: From patient and witnesses
- PE/Neuro exam
- EEG: - Photic stimulation
 - Hyperventilation
 - Sleep deprivation
- Special Studies:
 - CT & MRI
 - Intensive CCTV/EEG monitoring

D. Treatment:

- Antiepileptic drugs in the past:
 - marijuana, bromides, phenobarb
- Present Rx
 1. Specific AEDs:
 - phenytoin; carbamazepine (Tegretol); Na Valproate; ethosuximide
 2. Non-Specific AEDs:
 - barbiturates; benzodiazepines
 3. New AEDs:
 - Felbamate
 - for children; 3,000 patients studied and 100,000 pts using it in 6 months; Toxicity: aplastic anemia, hepatotoxicity.
 - Gabapentin
 - use in partial seizures; low toxicity
 - Lamotrigine
 - well tolerated; rash 5-6% of patients
 - Toprivamate (Released 1 month ago)
 - neurotoxicity
 - Vigabatin (U.S.-Japan)
 - good drug; available next year
 4. Parenteral Drugs
 - IV phenytoin
 - markedly insoluble; given IV carefully to prevent extravasation
 - Parenteral Fospharytoin: Well tolerated, faster administration; IM also; Disadvantages: perineal itching; cost

II. Gamma-Aminobutyric acid (GABA) Synapse

A. General: GABA is the most common neurotransmitter (includes 40% of the drugs).

GABA Receptor Modulates:

- Benzodiazepan receptors; Picrotoxin receptors; Barbiturate receptors; Steroid Receptors

B. Clinical use of drugs at the GABAa Receptors:

- antianxiety drugs;
- anticonvulsants
- sedatives
- hypnotics
- anesthetics (Also caffeine, amphetamines)

C. Drugs acting at GABAa Receptors

- Past: alcohol, barbiturates
- Present: benzodiazepines eg Valium
- Future: neurosteroids; butyrolactones

re Butylolactones: The next 10 years will be exciting times.

Miscellany

A farmer stood leaning on a fence at the edge of his property. He watched as a red sports car come over the top of a hill and followed the road up to the spot where he stood.

"Do you know how I can get to Route 91?" the driver asked.

The farmer thought for a few seconds. Then he said, "Nope."

"Do you know where the nearest turnpike entrance is?" the driver asked.

"Nope."

"How about the town of Hadley. Do you know which direction it is from here?"

"Nope."

Exasperated, the driver raced his engine. "You don't know very much, do you?"

"Nope," the farmer said. "But I'm not lost."

Larry Wong's Repertoire

"What's a honeymoon salad?"

(It's lettuce alone without dressing).

Potpourri

A man took his terminally ill dog to a vet. The vet took the old dog in the back and laid him on the examining table. His pet cat came in and sniffed the dog. Sniff-sniff here and sniff-sniff there for nearly a half hour until the dog finally stopped breathing. The vet approached the dog owner.

"Sorry, but your dog is dead. There wasn't much we could do for him."

"Is there a charge?" the man asked.

"The charge will be $850 dollars."

"What? Thats preposterous!"

"Well, $50 dollars is my fee and $800 dollars for the cat scan."

(An Atlanta Georgia joke as related by 'Don't Quote Me' Ben Tom)

Elected, Honored & Appointed

Ophthalmologist **John Corboy** is the Small Business Person of the Year. John is surgeon and director of the Hawaiian Eye Center with nine locations. He founded the Hawaiian Eye Foundation, a non-profit charitable group which provides services, education and research on vision in Pacific peoples and sponsors eye missions to the South Pacific.

The Talented

Kaneohe resident and singing Straub physician **Kalani Brady** played Sky Masterson (Broadway's leading crap shooter) in "Guys and Dolls" at the Richardson Theater. Kalani's previous role was as a rabbi and Jewish father in "The World of Sholom Aleichem." Kalani admits he is no Marlon Brando, but promise that his character will be suave and debonair with a "devil-may care attitude."

Hypocrite's Oath

Luciel Jokeil, columnist for Island Business discovered a 1935 HMA publication with the following ad for Philip Morris cigarettes: "Take no one's word but your own" as to the advantages of any one cigarette for patients with irritation of the upper respiratory tract due to smoking—The published studies on cigarette differences are merely a starting point—It is only when doctors make their own tests on their own patients who smoke that they are fully convinced of Philip Morris's superiority."

(Shades of HAA2?)

Federal Foolishness and Marijuana

Continued from Page 84

that such a change in policy would have no adverse effects. The argument that it would be a signal to the young that "marijuana is OK" is, I believe, specious.

This proposal is not new. IN 1986, after years of legal wrangling, the Drug Enforcement Administration (DEA) held extensive hearings on the transfer of marijuana to Schedule 2. In 1988, the DEA's own administrative-law judge concluded, "It would be unreasonable, arbitrary, and capricious for DEA to continue to stand between those sufferers and the benefits of this substance in light of the evidence in this record."[1] Nonetheless, the DEA overruled the judge's order to transfer marijuana to Schedule 2, and in 1992 it issued a final rejection of all requests for reclassification.[2]

Some physicians will have the courage to challenge the continued proscription of marijuana for the sick. Eventually, their actions will force the courts to adjudicate between the right of those at death's door and the absolute power of bureaucrats whose decisions are based more on reflexive ideology and political correctness than on compassion.

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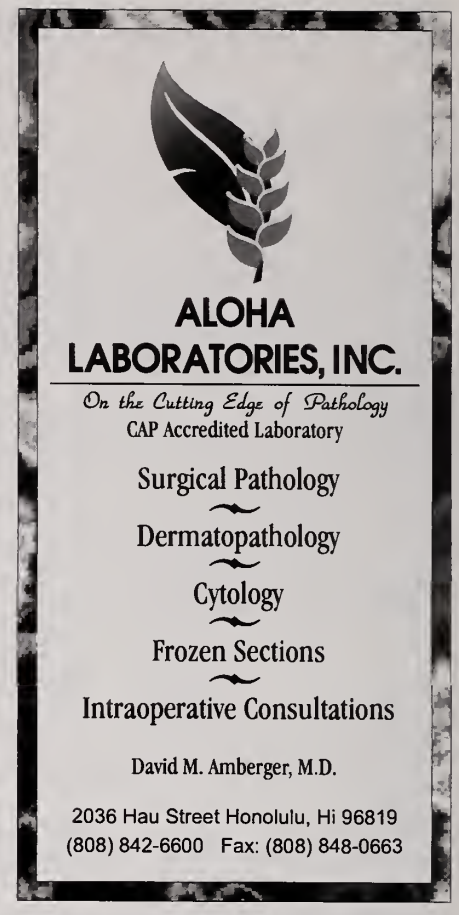
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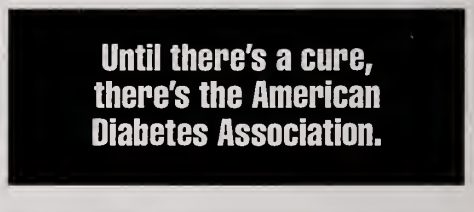
Editor's Note: The Doctor's Dilemma

Compassion, as defined in the dictionary, is the feeling of "sorrow for the distress of another, with the desire to help." Indeed, it is this feeling of compassion that unifies us as physicians, and that motivates us to continue to practice the art of medicine day by day.

The understanding that medicine is not strictly scientific intercourse, but an art form as well, has permitted us as physicians to use our best judgement in the care of patients when faced with a dilemma.

In recent years, governmental constraints have posed a different type of dilemma before our medical community—one with far-reaching horns capable of mortally wounding our nation's strong medical profession, and by extrapolation, our patients. Today's two-pronged conundrum is this: can we continue to treat patients with compassion and best judgement while still remaining in compliance with new law?





Letters to the Editor

Continued from Page 87

I have always had the utmost respect for your causes and crusades. I have followed and praised your work for historic preservation and avoidance of sun radiation. I am, therefore, saddened by your support and crusade for physician assisted suicide.

Physicians and healers. Tradition has banned assisted suicide since the time of Hippocrates. Physician assisted suicide is a slippery slope, very slippery. I fear what it will lead to. I believe that we, the profession, can do a much better job in relieving the pain and suffering of the dying patient. I hope to work toward an improvement in physician skills in this area.

I was moved to write this after getting a consult letter from you with Hemlock Society info inserted. I cannot support you on this one, in fact I'll fight you every inch of the way.

John H. Houk MD

I noted with interest that in your 1/97 editorial of the HMJ the Blue/Black Ribbon panel had an absence of physicians who are on the front lines of decision making such as pediatric surgeons, trauma surgeons, oncologists, oncologic surgeons, neonatologists, intensivists, etc.

These are the ones who interface with the public and are intimately involved with pulling or not "pulling the plug" (also transplant surgeons).

I, and I'm sure other of similar stripe, would be willing to serve.

Walter K.T. Shim MD



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The Weathervane

Russell T. Stodd MD

Believe everything you hear about the government; nothing is too impossibly weird.

How confused is the present U.S. health care market? So confused, that Washington is willing to pay New York hospitals $400 million over the next six years not to educate doctors. According to HCFA, more doctors means more expenditures for Medicare, so the perceived solution is to reduce the number of resident positions. But, because the hospitals depend on the Medicare dollars of $100,000 each year for each resident physician (whom they pay $40,000), the government will continue to pay the hospitals. In return, the hospitals agree to reduce the number of resident positions by 25%.

Laser Hype! Get rich quick—or maybe not.

Summit Technology, Inc., announced plans to spin off its chain of vision-correction centers. The company plans to focus instead on its core business of selling the laser equipment to doctors. While analysts hailed the move as long overdue, they remained skeptical that Summit can turn around its flagging fortunes. Once the high-flyer, Summit has been hit hard by stiff competition, poor earnings, and a federal government inquiry over leaked documents. Additionally, the market for eye-surgery lasers has proved a disappointment, and consumers remain cautious about the surgery and its significant cost.

This plan needs a certain something—possibly burial.

The idea seemed like an instant winner to Madison Avenue. C. Everett Koop, MD one time Surgeon General, would appear on Time-Life Medical tapes telling consumers about 30 common illnesses from prostate disorders to migraine and breast cancer. Drug stores, markets and discount stores would offer vital disease information next to aspirin, band-aids and hemorrhoid cream at $20 a tape. With news star Linda Ellerbee anchoring the video and the fatherly Dr Koop sitting on the porch talking to people, the public was just waiting to be informed. After all, health was "hot." A certain boffo bonanza! NOT! After a sales disaster, Time-Life pulled the plug on the producers, and closed the door. Dr Koop was frustrated and perplexed, called Time Warner Chairman Gerald Levin, and found the decision was irrevocable. Sorry, Doc, you should have kept your day job (and uniform).

If man had created man, he would be ashamed of his performance.

Because the Texas bar believed that lawyers were violating soliciting rules, a bar official represented herself as the mother of a Valujet crash victim. As expected, two lawyers were quickly caught by the Commission for Lawyer Discipline, but so far no charges have been filed against the ambulance chasers. In fact, they are objecting, and claim the bar has violated its own rules against misrepresentation. Texas bar officials claim they had no plans for a sting operation until they were contacted by a woman who had previously worked for two Houston attorneys who employed her to sign up victims' families. Those fun-loving lawyer people—what a grand bunch! Makes one recall that cartoon of two snakes eating each other.

When the government has it in for you there's no limit to what you may have to endure.

While Congress is planning additional cuts in Medicare to doctors and hospitals (including some horrifying eye surgery reductions), patients are registering their dissatisfaction with hospital care. A survey done by the American Hospital Association encompassing 37,000 people in 12 states, revealed that patients find medical centers a "nightmare to navigate," that they get sent home before they feel ready, that they seemed alienated from their doctors, and that the hospital employs uncaring care-givers. William Speck, MD president of Columbia-Presbyterian Medical Center, traces the problem to the rise of managed care, the focus on costs, and that "the whole system has become depersonalized." Obviously there is still a significant market for independent patients and independent doctors.

Sin is geographical. Ethics are situational. Truth is elastic.

Who do you trust? The public give the President a confidence level of 38% in high ethical standing, but then the public also rates Jack Kemp, the GOP potential presidential candidate at the same level. Billy Graham, long time bible thumping evangelist, rates a 62% high ethical standing, but even he is still far behind the man the public gives the highest rating at 76%, former General Colin Powell.

The professor ultimately makes an ash of himself.

If you are old enough to recall the 60's, you remember Professor Timothy Leary, one-time Ivy League guru of LSD and other recreational toxins (turn on, tune in, drop out). He led a generation of flower children seeking the meaning of life. Prostate CA caught up with the aging prof last May, and now he is truly headed out of this world. For a fee of $4800, Celestis, Inc., will provide an "astrofunerary" service and Leary's ashes will go into orbit. According to predictions, the ashes will orbit 350 miles above the earth for about one year, then gradually succumb to gravity as Timothy drops out for the last time.

You don't tell deliberate lies, but sometimes you have to be evasive.

A poll early last year revealed that 90% of Washington journalists voted for Bill Clinton, but the media scoffed when critics called that confirmation of a liberal bias. A newer survey shows most Americans disagree. The Center for Media and Public Affairs hired Louis Harris to interview 3,000 people and determine what the public thinks about journalists. Some findings: the media ignore people's privacy, are influenced by the powerful, are too negative, have too much influence, and abuse freedom of the press. Other findings—49% think that the media usually don't get facts straight, and most Americans think the media are biased—67% said the bias is liberal rather than conservative (even by liberals).

Addenda—

- Rhinitis is the most common chronic disease in the U.S.
- Population of Kuwait 600,000; percentage of adults employed by the government, 92%
- A lot of people have warned Pres. Clinton that Bosnia will turn into another Vietnam, which would be embarrassing for him because he will have to go back to college.

Aloha, and keep the faith—rts ■

Do you know why doctor-owned professional liability insurance companies were created... in the first place?



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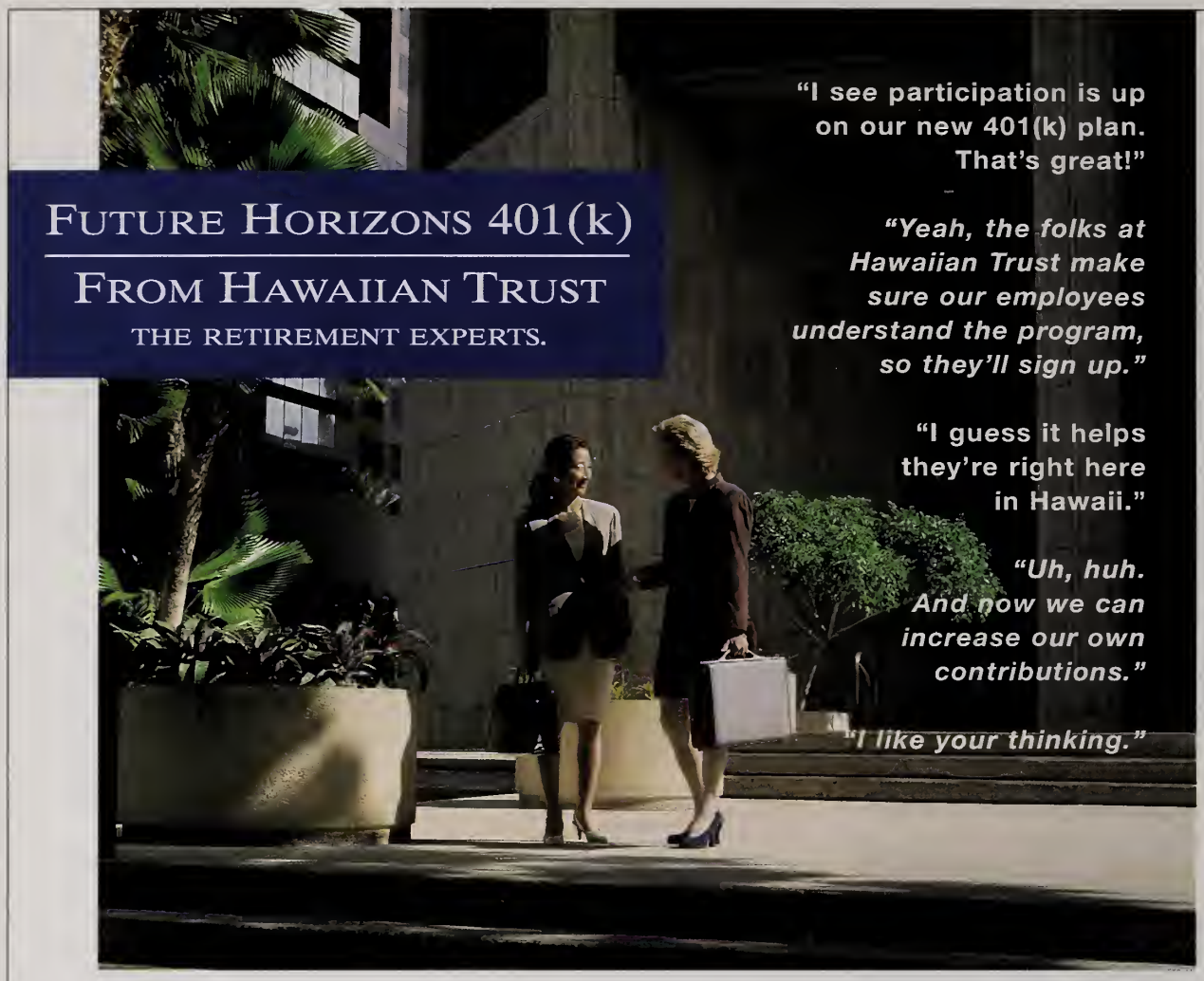
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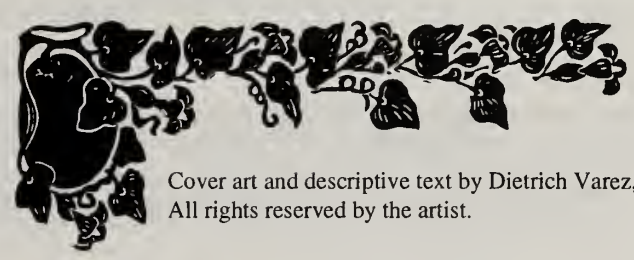
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Hawaiian Surfers

Surfing is synonymous with Hawaiian sportsmen. Major contests and events are held annually to this day.

Hawaii Medical Journal

Extra copies of the *Hawaii Medical Journal* September Special issue on Domestic Violence and the December Special issue on Death and Dying are available. For more information please contact the Hawaii Medical Association at (808) 536-7702, or Fax us at (808) 528-2376.

Editorial

Stroke Awareness Month

Norman Goldstein MD, F.A.C.P.
Clinical Professor, Medicine (Dermatology)
John A. Burns School of Medicine
University of Hawaii

May is Stroke Awareness Month. Stroke is now the nation's third leading cause of death. 28% of stroke patients are under 65! The good news is that almost four million Americans have survived strokes.

A very interesting report on Stroke Prevention Medication appeared in *Stroke*[1] by Larry Goldstein, MD. (no relation), David Matchar, MD et al.

The Stroke Patient Outcomes Research Team (SPORT) based at Duke University analyzed the responses of 1,006 physicians who participated in the national study.

While 85% of all responding physicians always or often prescribed aspirin or other platelet anti-aggregants, not all prescribed them at the same rate. As measured by the odds ratio, neurologists or internists were about two-thirds more likely than surgeons to prescribe these medications.

Pertaining to anticoagulants, non-internist primary care physicians prescribed five times more, internists 3.5 times more, and neurologists two times more than surgeons.

The researchers suggest that some of the variations in practice may be attributed to physicians' uncertainty. Clinical trial data are rapidly becoming available to help guide the specific type of patients at elevated risk of stroke.

1. U.S. National Survey of Physician Practices for Secondary and Tertiary Prevention of Ischemic Stroke. *Stroke* 27(9)1473-1478, 1996.

Editors Note:

Mahalo to the Ethics Awareness Committee of the American Academy of Dermatology for providing the Patient-Physician Convenant on page 129. The Patient-Physician Convenant reflects the professional attitude that we all have in regard to our patients today and sends a very positive message to our patients. Please feel free to frame this copy for your office.

Letter to the Editor

Physician-assisted Dying: The Coming Debate

Kenneth Kipnis PhD
Chairman Department of Philosophy
University of Hawaii

As many of us eye the imminent Supreme Court decision on physician assistance in dying (PAD), there is reason to be apprehensive that Hawaii, like many other states, will too soon have to consider the practice-standards, laws and regulations that should govern it. Right now, at best, there is no clear legal standard in this state, no shared understanding of what PAD might look like. In some ways, we are very much like Kevorkian's Michigan. The coming Supreme Court opinion will likely settle whether states can issue blanket prohibitions on physician-assisted dying (as New York and Washington—but not Hawaii—have done) or whether there is a Constitutionally-protected liberty interest that prevents this.

In either event, I expect we will have legislative work to do. For if New York and Washington win in the Supreme Court, we are going to have to argue the question of legalization. It would be an advantage if the candidate laws and regulations were as intelligently drafted as possible. But if New York and Washington lose, the issue of legality will be settled and it will only remain to draft our laws and regulations. Regardless of the court's decision, Hawaii would benefit from an improved understanding of the regulative and professional options that are open to us. The most effective way of realizing that goal would be a public conference focusing on our alternatives.

Let me list a few of the pertinent questions that such a conference might cover.

1. What medical conditions would a patient have to meet in order to be eligible under the regulations for PAD? Three of the most discussed criteria involve terminal illness, unmitigable pain and unrelievable suffering (a much broader concept than pain).

2. What cognitive capacities must patients have in order to be eligible for such assistance? Two of the most discussed options involve decisionally-capacitated patients who have repeatedly made such requests and formerly capacitated patients who have prepared an appropriate advance directive.

3. What procedures should be in place to ensure that the standard set in the answers to #1 and #2 are met? Currently discussed options involve the establishment of specialized "palliative care" review committees and independent physicians to provide second opinions about decisional capacity, the underlying medical disorders and treatability. Waiting periods have been discussed in connection with some types of case, as has the routine use of counseling.

4. What assistance can patients ask for? Two of the most discussed options involve the writ-

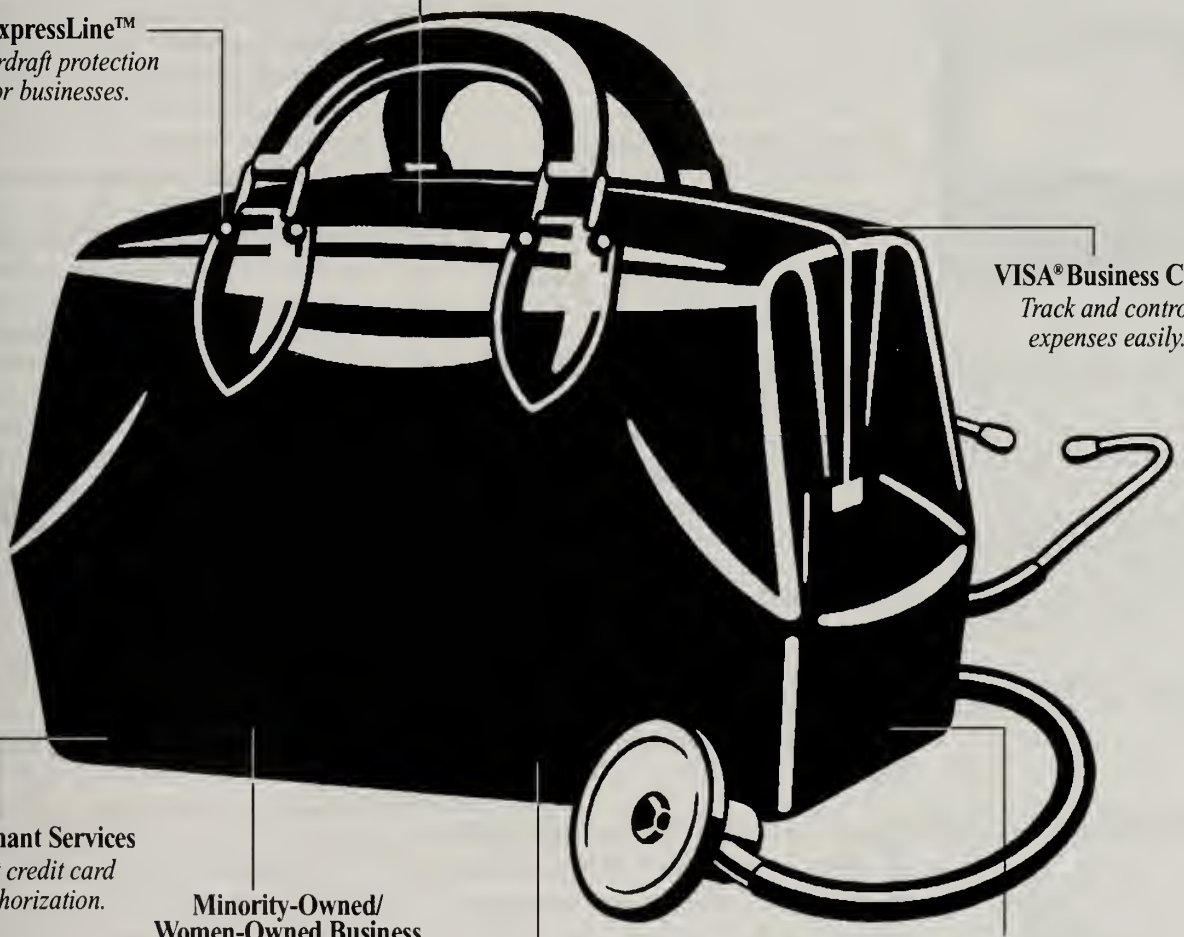

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ing of prescriptions for lethal medications and the actual administration of preparations.

5. Who may provide such assistance? Should medical doctors have an exclusive right to provide such assistance or should others be permitted to do so?

6. Could fees be paid for such services? How about fees that did not provide a profit above and beyond expenses? Should a "market" for such services be officially discouraged?

7. What measures might be called for to prevent abuse? Should certain types of reporting and documentation be required? What organizations or agencies would receive such reports? What measures would be taken in the event that reporting and documentation were neglected? What types of record review would occur? Should PAD be judicially supervised?

8. How should discussions of PAD be conducted between physician and patient? What counseling and information should patients receive prior to making a decision? Should physicians ever initiate or encourage such discussions? What practices should physicians follow if a patient asks for PAD and the physician is opposed to participating in it?

9. What protections, if any, might be required to prevent coercion and undue influence?

Intentionally missing from this list is the issue many feel to be the most important: Should PAD be legal? This is because there is no consensus on the most defensible form of PAD. No thoughtful person could support PAD in all its forms. For this reason, the conference is best seen as a preface to a political debate that awaits us.

We do not have to reinvent the wheel. There are a number of groups nationally and internationally who have been working vigorously on these questions. Oregon, the Netherlands, and, for a brief period, the Northern Territory in Australia have had laws in place. Guidelines and model statutes have been developed and critiqued in New York, New England and the Bay Area. There are more than a few academicians, physicians, and ethicists who are making substantial contributions to our thinking on these issues. And there are organizations that could provide support and financial assistance if there was broad agreement that such a conference could contribute to the quality of public debate here in Hawaii and elsewhere.

A title for the conference might be *Living With Physician-Assisted Dying*. Properly mounted and advertised, it could draw attendees both locally and nationally. Videotaped, it could be rebroadcast on public access televi-

sion statewide. It might be possible to assemble a publishable volume of the conference proceedings.

But such a venture is best pursued by a broad community coalition. Under the present circumstance, where there is a common need for a common education, nothing could better further our community's interest in carrying out responsible and effective deliberation on the choices that PAD may soon force upon us.

Special Commentary

Documentary on the Work of Dr Mitsuo Aoki Looking for Families to Share Their Experiences

A Healing Journey to Show How the Hawaii Counselors Provide Comfort to the Catastrophically Ill and Their Families

When serious illness strikes it can be one of the most painful, stressful and confusing times. But it doesn't have to be that way, according to Dr Mitsuo Aoki, who for more than 30 years has acted as counselor and facilitator to more than 300 Hawaii patients and their families and friends. He has taught them to learn from the illness by providing a framework to a better understanding of life and the healing process.

As a Professor of Religion Emeritus of the University of Hawaii at Manoa, he has devoted his life to counseling families who are facing catastrophic illnesses. Dr Aoki, or "Mits" as he is known to many, uses cultural and spiritual traditions from Asia, Polynesia and Europe in helping the ill through their journey. His approach combines humanism and gentle humor with deep compassion.

Didi Leong is the Executive Producer of A Healing Journey, an hour-long documentary that will show the results of Dr Aoki's professional techniques as he works with patient and their families.

The program will show how Dr Aoki works with a few families who are dealing with this difficult time. "We want the film to bring out that even in our darkest hours, it can be a time of enlightenment, love and compassion," said Aoki. "When people come together to face these difficult situations, it presents opportunities for sharing, honesty, and growth and truly connecting with loved ones...connections that will succeed our mortal lives."

This documentary will be the first multicultural contribution to the audiovisual literature on dealing with the serious illness of loved ones.

The production team is nearly finished raising funds for the unique project and is now looking for families who will let the film crew document how Dr Aoki helps the patient, family and friends during the process.

Instead of being created by a scriptwriter's imagination, the intimate interaction between families and Dr Aoki will be captured directly on videotape.

"We have an unusual request; that a person who is seriously ill allow us to record the interaction between Mits Aoki and that person, his/her family and friends during the months-long process," said documentary producer Melanie Kosaka. "The sharing of that personal process could be one of the most valuable gifts a person could ever give to others," she continued.

When complete, the documentary will air on Hawaii Public Television. It will be offered to national and regional television stations throughout the Public Broadcasting System.

The dedicated production team includes Executive Producer Didi Leong, Producers Melanie Kosaka and Bob Bates, Director Joy Chong-Stannard, Project Producer Muffy Gushi and Associate Producer Cindy Powell.

If you have a patient who would like to be included in the documentary, A Healing Journey, call Melanie Kosaka at 808-537-3537 or Muffy Gushi at 808-242-4507 (Maui).

A Healing Journey is a co-production of Lotus Films, KHET Hawaii Public Television and Community Development Pacific with support from the Alexander & Baldwin Foundation, Atherton Family Foundation, Chung Kun & David Ai Trusts, Mr. & Mrs. Sidney Ayabe, Mr. and Mrs. Earl Bakken, Fred Berry, Sumiko Biller, Robert E. Black Foundation, Borthwick Group, Mr. & Mrs. Paul Cassiday, Dr & Mrs Robert Fujimoto, Gannet Foundation, Mr & Mrs James Growney, Hawaii Biodyne Inc., Hawaii Planing Mill Co., HMSA, Julia Ing, Island Insurance Companies, Mr & Mrs Peter Lee, The Sun Leong Family, Mr and Mrs Herb Lotman, K. J. Luke Foundation, Bev Lum, Louis and Y. T. Lum Foundation, Manoa Shopping Center, Inc., McInerny Foundation, Bill Mills, James Napier, L. Q. Pang Foundation, Dr M. Pierre Pang, Servco Pacific, Colleen Sullivan, The Sullivan family, C. S. Wo Foundation, Mr & Mrs Francis Wong, and Pundy and Shirley Yokouchi.

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Report from the Hawaii Medical Library

John Breinich, Executive Director

1. The Annual Book fund drive resulted in donations of $9636. These donations are used for new book purchases or for unrestricted donations to the Library.
2. The Queen's Medical Center Historical Room Cataloging is continuing and more than 2400 photographs have been cataloged into the database with about 15% of these photos being scanned into the record for on-line viewing. The database will also include information on the collection's books, in-house publications, artifacts, and extensive clippings file. The project has been funded until June and we have requested an extension for six months to complete the cataloging of the Historical Room's materials. This database will be a valuable tool for expanded access to these unique resources.
3. The use of the Hawaii Medical Library (HML) Home Page continues to increase with many visits from the mainland and around the world. The pages describing our garden of Hawaiian healing plants *(Mala La'au)*, our CD-ROM network access, the Archive Collection and the Electronic Medical Journals page have been especially popular. We are always looking for new items to add that are of interest to the clinical professional and have recently added several links for free Medicine access. Classes are available for novice and advanced Internet users.

The Archive and Rare Book Collections section of the HML Home Page continues to receive many hits. We have completed transcribing the entire collection of biographies from In Memoriam: Doctors in Hawaii and have added them to our Web Page, including a scanned photograph if available. A warm mahalo goes out to Dr. Ann Catts and to the Circulation Staff who contributed to this project.

Future additions to this section are two sets of transcriptions prepared by Dr. Catts: the minutes of the Hawaii Medical Association from 1904 to 1925 which are written in long hand and have never been published and the records of activities of the medical community on December 7, 1941. Dr. Catts has also accepted the daunting task of creating new biographies for In Memoriam, which was originally started by the Honolulu County Medical Society Auxiliary. If anyone is interested in assisting the Hawaii Medical Library in researching and writing biographies, please call Carolyn Ching, at 536-9302, ext. 113.

Editors Note: *Many thanks to Sharon L. Berglund, MLIS, Reference Librarian and Carolyn Ching, Reference/Special Collections Librarian.*

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Ryuzo Yanagimachi, PhD
"A World Class Scientist"

by Vincent J. De Feo, PhD
Professor and Chair, Department of Anatomy and Reproductive Biology
John A. Burns School of Medicine (JABSOM)
University of Hawaii

The Japan Academy of Sciences bestowed upon Dr. Ryuzo Yanagimachi the world renowned "International Prize for Biology" for 1996. It is an annual award given to an individual who "has made an outstanding contribution to the advancement of research in fundamental biology." The award ceremony was conducted in Tokyo on November 25, 1996 in the presence of the Emperor and Empress of Japan.

This recognition has brought great pride, not only to the School of Medicine and the University of Hawaii, but also to his colleagues, his former students and postdoctoral fellows from all over the world who have studied with him.

Who is this scientist named Dr. Yanagimachi or affectionately known as "Yana"? He was a founding member of the Department of Anatomy when the John A. Burns School of Medicine was newly established in 1966. He was an assistant professor assigned a primary role to enhance and focus the department's research in Reproductive Biology and contribute to the recruitment of other faculty.

Within the basic sciences in the School of Medicine, "Yana" has the distinction of thirty years of uninterrupted research funding from the National Institutes of Health (NIH). This record has been maintained even when NIH funding for basic research has been increasingly difficult to obtain. His success is due to his diligence in always being at the forefront of reproduction research. In addition, he is known nationally and internationally for his simple, elegant experiments which have produced breakthrough solutions of some serious human infertility problems.

Dr. Yanagimachi's major contribution was the first successful in-vitro capacitation of mammalian (hamster) sperm. The difficulty rested in the fact that mammalian sperm in the ejaculate cannot fertilize until they are transformed in the female reproductive tract through a process known as "capacitation". "Yana" developed a culture medium that included adequate amounts of calcium ions which produced sperm capacitation outside the female reproductive tract. The result involved membrane changes which caused the sperm to become hyperactive and gave them a new propulsive power needed to penetrate the egg's zona pellucida. Contact with the zona pellucida initiated the "acrosome reaction" which resulted in a selective loss of the sperm head's complex membrane system and exposed a special region on the sperm head. This region became the critical site for attachment and fusion with the egg's membrane. The sperm head was then brought into the egg's cytoplasm. This sperm head composed of genetic material expanded, became the male pronucleus and combined with its female counterpart, thereby completing the fertilization process.

Yana's achievement of in-vitro fertilization made detailed study of the sequential steps possible, using electron microscopy. Although each species had its own variation, the technique was soon applied to the animal breeding industry, including zoos. The use of in-vitro fertilization enabled a dramatic increase in the yield of genetically excellent livestock, as well as contributing to the preservation of endangered species. The initial success in the human, in England in 1978, is a direct outcome of Yana's earlier work.

Yana also continued to make other significant discoveries. He found the mechanism by which attachment of the sperm head to the egg surface changed the egg's membrane and prevented subsequent sperm from entering, thus avoiding polyspermy. In other experiments, he demonstrated that the zona pellucida controlled species specificity. When the zona was removed, cross-species fertilization was achieved.

In 1976, Yana made a remarkable discovery. Using the hamster and mouse, he found that he could bypass the requirements for sperm capacitation and acrosome reaction by microinjection of a single sperm directly into the egg. He showed that those processes were only related to getting the sperm head into the egg. These experiments reached the applied stage during the last decade. Fertility clinics frequently use this intracytoplasmic sperm injection technique (ICSI) in severe male related infertility. The use of microinjection in the fertilization process has indirectly contributed to the success of cloning in sheep, using the nucleus of a non-sperm cell.

Dr. Yanagimachi continues to lead the world in the field of fertilization. His current research focus lies in the question, "What about the male who cannot produce any sperm in the ejaculate?" He hopes to find some answers through exploring the potential of immature sperm obtained from the testis. He has shown that in mice, the microinjection of spermatids results in fertilization and the production of healthy offspring. He is proceeding to test earlier forms in the spermatogenic sequence.

His basic science achievements continue to be recognized nationally and internationally with medals and awards from the United Kingdom and prizes from the United States. At the University of Hawaii, he is recipient of the Medal for Excellence in Research from the Board of Regents. We look forward to his future successes and wait in anticipation to see ways in which his basic research in reproductive biology will continue to influence the practice of medicine.

Multi-Center Sestamibi Parathyroid Imaging Study in Hawaii

Alan H.S. Cheung MD*, Mary S. Wheeler RN, MSN*, Lynn D. Madanay MD **, Edward Hew MD, ***Marc N. Coel MD**** , Livingston M.L. Wong, MD*

Technetium-99m (^{99m}Tc) sestamibi (MIBI) was first used as a parathyroid imaging agent in Hawaii in 1991. The purpose of this study was to determine the sensitivity and positive predictive value of the MIBI scan in detecting abnormal parathyroid glands. A retrospective, multi-center study from 1992-1994 involving 33 patients in four hospitals showed the overall sensitivity of the MIBI scan for detecting hyperparathyroid disease was 90%. The positive predictive value was 93%. It was more sensitive in detecting adenomas (95%) than hyperplasia (45%). In conclusion, the MIBI scan can be helpful in detecting abnormal parathyroid glands and may be most useful prior to reoperations for persistent and recurrent hyperparathyroidism.

Introduction

Clinical symptoms of hyperparathyroidism (HPT) are often nonspecific, especially early in the disease process. The incidence of HPT is increasing, with most patients found in an asymptomatic state by routine screening. The most common causes for this condition are parathyroid adenomas, hyperplasia, and rarely, neoplasms. In most cases, the cause of primary HPT is a solitary adenoma involving one of the parathyroid glands. For patients with end-stage renal disease (ESRD), the incidence of HPT is increased over that of the general public, and is almost always due to hyperplasia of the glands. Neoplasms in the parathyroids are rare, but do occur. A diagnosis of HPT can often be confirmed by elevated serum calcium levels and/or elevated parathyroid hormone levels. For patients with hyperfunctioning parathyroid glands, surgical exploration of the neck with removal of the suspicious gland(s) is the definitive treatment. This approach has been shown to be curative in the majority of cases, with surgical success rates of 90%-95%.[1]

Anatomically, parathyroid glands may be found anywhere from beneath the mandible to the level of the pericardium.[2] They are most commonly found anteriorly, in the lateral posterior surface of the lower pole of the thyroid, in the thymic tongue, or lateral to the lower pole of the thyroid.[3] Most individuals have four parathyroid glands, but there are documented cases of supernumerary glands. Ectopic glands have been located in the thyroid gland, substernal and mediastinal areas.

Due to variations in anatomical positions where the parathyroid glands have been found, and the concern that an abnormal number of glands may be causing the hypercalcemic condition, preoperative techniques that reliably locate the parathyroid glands have been sought after and investigated. A variety of imaging techniques have been attempted, including non-invasive tests such as ultrasound, magnetic resonance imaging, computed tomography, and nuclear medicine scans using a variety of radiotracers,[4,5] and the more invasive diagnostic tests such as venous sampling and selected arteriography. The search for valid and reliable methods has recently focused on the use of a radiotracer technetium-99m (^{99m}Tc) sestamibi. This radiotracer, originally marketed for cardiac imaging, has been shown to be useful in the preoperative detection and localization of parathyroid adenomas in patients having proven hyperparathyroidism.[5,6]

Available in Hawaii since 1991, the sestamibi (MIBI) scan is currently the most popular method used preoperatively to localize the parathyroid glands. During this study period, all four participating hospitals followed a similar procedure that included the use of a single radiotracer and a "washout" technique.[6] The purpose of this study was to determine the sensitivity, specificity, positive and negative predictive value of the MIBI scan by grouping the data from four local hospitals.

Methods

Institutional Review Board approval to conduct this medical record study was obtained from four hospitals in the metropolitan Honolulu area. These Hospitals were St. Francis Medical Center-Liliha, Queen's Medical Center, Kuakini Medical Center, and Straub Clinic and Hospitals, Inc. Due to the geographical proximity of these hospitals and the patient flow between them, a multi-center

*Department of Surgery
John A. Burns School of Medicine
University of Hawaii
and St. Francis Medical Center
Honolulu, Hawaii
**Department of Medicine
John A. Burns School of Medicine
University of Hawaii and the
Department of Nuclear Medicine,
Kuakini Medical Center and
Straub Clinic and Hospital, Inc.
***Department of Nuclear Medicine,
St. Francis Medical Center
****Department of Medicine
John A. Burns School of Medicine
University of Hawaii and the
Department of Nuclear Medicine,
Queen's Medical Center

Address Reprint Request To:
Alan H.S. Cheung, MD
Dept of Surgery, Sullivan IV, Rm 439
2230 Liliha St., Honolulu, HI 96817
(808) 547-6499 , FAX (808) 547-6487

Fig. 1.—Sestamibi Scan Showing Prominant Left Lower Parathyroid Gland, Most Consistent with Parathyroid Adenoma (see arrow)



Table 1.—Mathematical Computation for Sensitivity, Specificity, Positive and Negative Predictive Value.

	Hyperparathyroid Disease		
MIBI Scan Results	Yes	No	Total
Positive	a	b	a + b
Negative	c	d	c + d
Total	a + c	b + d	

a = True Positives	b = False Positives	c = False Negatives	d = True Negatives

Sensitivity	$= \frac{a}{(a+c)}$
Specificity	$= \frac{d}{(b+d)}$
Positive Predictive Value	$= \frac{a}{(a+b)}$
Negative Predictive Value	$= \frac{d}{(c+d)}$

pooling of patients was used to obtain more comprehensive data. To identify study cases, the Nuclear Medicine Departments at the above institutions were contacted with a request for the names of individuals who had undergone a MIBI study of the parathyroid glands from 1992 to 1994. Using this patient list, inpatient medical records were reviewed from the respective hospitals.

When reviewing the medical records, if the patient had undergone a parathyroidectomy, the following information was obtained: pre-operative serum calcium level, surgical procedure performed, number and location of normal and abnormal parathyroid glands, time from incision to closure for the procedure, any surgical complications, pathology reports, and post-operative serum calcium level on the day of discharge. Patients who did not undergo surgery were excluded from the study.

If there was no inpatient medical record at the institution where the nuclear medicine study was performed, the referring physician's office was contacted and asked if the patient had undergone a parathyroidectomy at any other local hospital. Records were then reviewed at these hospitals.

Sestamibi Scan

A MIBI scan was performed when HPT was suspected. For this scan, no specific patient preparation is required. All four participating hospitals used similar, although not identical, imaging techniques as described by Taillefer[6] with early and late MIBI imaging. With the patient supine and neck extended, anterior images of the neck and chest were acquired 10-15 minutes and 2-3 hours after intravenous administration of 20-24 mCi MIBI. Analog images were acquired with a preset time of 10 minutes using a scintillation camera with low energy, high resolution or all-purpose parallel hole collimator. Digital data (128 X 128 matrix) were also acquired during 10 minutes. Optional views included imaging with a pinhole collimator. SPECT (tomography) or use of a second tracer was not utilized during the time interval for this study. The initial image obtained at 10-15 minutes after injection of MIBI was used as the "thyroid" phase of the study and represents the concentration of the tracer by the thyroid parenchyma. The second image performed between 2-3 hours after injection corresponded to the delayed or "parathyroid" phase. Both initial and delayed images of a given patient were placed side by side for comparison and viewed on either hardcopy or computer display.

A positive MIBI scan for parathyroid **adenoma** was defined as an area of increased focal uptake of the tracer in projection of the thyroid bed and surrounding areas or mediastinum which showed either a relative progressive increase over time[7] or a fixed uptake which persisted on delayed imaging (see figure 1). This pattern differs from uptake in the normal thyroid tissue which progressively decreases over time (differential washout analysis). This is due to the fact that the tissue kinetics of the thyroid and hyperactive parathyroid have substantially different resident times for Tc-99m sestamibi. The location of the parathyroid usually included the exact location of the parathyroid: right or left side; upper, lower or ectopic location. Parathyroid **hyperplasia** was interpreted only if more than one abnormal focus was identified on dual-phase MIBI imaging.

Data Analysis

For each patient in this study, the results of the MIBI scan from the nuclear medicine report, the surgical report and pathology findings were retrospectively compared to determine the sensitivity and specificity of the MIBI scan. For a true positive, the scan interpretation was the same as the surgical and pathology findings. A false positive study was when the MIBI scan determined disease, but the diagnosis did not match the surgical findings, or there was no parathyroid disease. A false negative study did not show any abnormality on the scan, while the surgical and pathological reports showed abnormally enlarged tissue. False negative results were also

Table 2.—Patient Diagnosis Comparing Sestamibi Scan Results & Actual Surgical/Pathology Results.

	Actual Surgical Pathology Results		
MIBI Scan Results	Adenoma	Hyperplasia	Normal
Adenoma	n = 19	n = 4	n = 2
Hyperplasia	n = 0	n = 5	n = 0
Normal	n = 1	n = 2	n = 0

	True Positive	True Negative	False Positive	False Negative
Adenoma	19	0	6	1
Hyperplasia	5	0	0	6

Sensitivity for Adenoma	19/20	95%
Positive Predictive Value	19/25	76%
Sensitivity for Hyperplasia	5/11	45%
Positive Predictive Value	5/5	100%

assigned to patients where one type of disease was diagnosed by MIBI and another type was diagnosed by pathology.

Sensitivity was defined as the number of true positives divided by the sum of true positives and false negatives. Specificity was defined as the number of true negatives divided by the sum of true negatives and false positives. The positive predictive value (PPV) of the MIBI scan was calculated by dividing the number of true positives by the sum of true positives and false positives. Negative predictive value (NPV) was the number of true negatives divided by the sum of false negatives and true negatives (Table 1).

Results

A total of 48 patient names were obtained from the Nuclear Medicine Departments of the four participating hospitals. Of these 48 patients, 33 underwent surgery on their parathyroid glands, and the data analysis refers only to this group. There were 22 females (67%) and 11 (33%) males. Average age of patients during the time of the scan was 50.6 years old (range 21 to 86). Average time from scan to surgery was 2.2 months (range 1 day to 18 months). Preoperative serum calcium levels ranged from 9.5 to 12.9 mg/dl (mean of 11.2±0.78 mg/dl). Three patients had undergone previous neck exploration. Eight of the patients has a primary diagnosis of end-stage renal disease and secondary HPT; 25 of the patients had primary HPT.

MIBI scans preoperatively diagnosed 25 patients with adenomas and 5 patients with hyperplasia. Three scans were interpreted as normal. In contrast, operative and pathologic findings confirmed 20 cases of adenoma and 11 cases of hyperplasia. Two cases were negative for parathyroid disease and resulted in thyroid biopsy or thyroid goiter removal. In the 3 cases where the MIBI scan was read as normal, the operative and pathologic findings were positive for adenoma (1 case) or hyperplasia (2 cases). In 4 cases, the MIBI scan was positive for parathyroid adenoma, but surgical findings were positive for hyperplasia (Table 2).

Table 3.—Patient Diagnosis Comparing MIBI Scan Results & Actual Surgical Confirmation of Disease

	Surgical Confirmation of Parathyroid Disease	
MIBI Scan Results	Positive	Negative
Positive	n = 28	n = 2
Negative	n = 3	n = 0

Sensitivity	28/31	90%
Specificity	unable to determine due to no true negatives	
Positive Predictive Value	28/30	93%
Negative Predictive Value	unable to determine due to no true negatives	

Three patients had a history of previous neck surgery. One of these patients had persistent hyperplasia following near-total parathyroid gland resection for hyperplasia that had occurred 3 years earlier. The MIBI scan and surgical/pathology results both diagnosed hyperplasia. Another patient who was diagnosed with hyperplasia in surgery had previously undergone a thyroid lobectomy. This patient had preoperative MIBI scans which were interpreted as adenoma initially, followed by compensatory hypertrophy. The last case involved resection of a Wharton's Tumor six months prior to the MIBI scan. This scan was interpreted as adenoma, but at surgery only 3 normal parathyroid glands were found.

Overall, the sensitivity of the MIBI scan for HPT disease (not differentiating adenoma from hyperplasia) was 90%. The positive predictive value (PPV) was 93% (Table 3). Specificity or negative predictive value (NPV) based on presence of disease could not be determined because no true negatives were identified by the study's methodology.

When the results were separated into categories of adenoma and hyperplasia, the sensitivity and PPV changed. The sensitivity of the MIBI scan for adenoma was 95% (19/20 cases), with a positive predictive value of 76% (19/25 cases). The sensitivity of the MIBI scan for hyperplasia was 45% (5/11 cases), with a PPV of 100% (5/5 cases), as shown in Table 2. For all cases, the specificity and NPV were not determined due to the lack of true negatives (i.e. not all patients with negative scans underwent surgery to confirm normality).

There were 3 cases where the MIBI scan was interpreted as normal, but parathyroid disease was confirmed by pathology. In 1 case, an adenoma was found, and in 2 cases, hyperplasia was found. In 4 cases, hyperplastic parathyroid disease was found at surgery, but incorrectly identified as adenoma by preoperative MIBI scans. In the calculations for sensitivity and PPV, these cases were used both as false positive for adenoma and false negative for hyperplasia.

The gland weight of the diseased parathyroids was listed for 28 of the 33 patients. The average gland size of a parathyroid adenoma was 1.45 ±1.2 gms (range 0.2 to 4.98 gms, n=18 glands in 18 patients). Hyperplastic glands averaged .55 ± .48 gms (range 0.02 to 1.9 gms, n=34 glands in 10 patients). The difference in gland weight was significant (p=.008, 2-tailed t-test).

The sensitivity, specificity, positive and negative predictive value based on individual glands can be calculated from this data, and are

Table 4.—Comparison of MIBI Scan Results & Actual Pathology Results by Individual Gland			
	Pathology Results		
MIBI Scan Results	Adenoma	Hyperplasia	Normal*
Adenoma	16	4	5
Hyperplasia	0	18	0
Normal	4	18	19

* also includes 2 cases of thyroid disease

	True Positive	True Negative	False Positive	False Negative
Adenoma	16	19	9	4
Hyperplasia	18	19	0	22

shown in Table 4. Although no individuals with normal scans underwent an operation, glands that were normal on MIBI scan were biopsied in some cases, and were used as true negatives if the MIBI report and pathology report were both interpreted as normal.

Postoperative serum calcium ranged from 7.8-11.4 mg/dl (mean 9.09 ± 0.92 mg/dl). Postoperative complications included 7 cases of hypocalcemia and one case of hoarseness and difficulty swallowing. All complications resolved by the time of discharge. There were no reoperations or recurrences noted during this study period.

Discussion

The sensitivity of the MIBI scan has been shown to be equal or superior to other forms of preoperative imaging of the parathyroid glands. There are multiple ways this radiotracer is used: as a single radiotracer in a washout technique as described,[6] in combination with other radiotracers in subtraction studies[4,8,9,10,11,12,13] with intraoperative PTH measurement,[14] with factor analysis of dynamic structures,[15] and intraoperatively combined with nuclear medicine imaging.[16] Review of these studies demonstrate a sensitivity range of 84%-100% for imaging parathyroid adenomas and 55%-100% for detecting hyperplasia.

The overall sensitivity of the MIBI scan for diagnosing hyperparathyroid disease was 90% in this study. This supports the national literature that the MIBI scan was more sensitive in diagnosing adenoma (95%) than hyperplasia (45%).

Assignment to categories in this study was strict as reflected in the sensitivity and specificity. A match between the correct anatomical position on both MIBI scan and surgical/pathology reports was required for a true positive reading in Table 3. In all cases, the correct side of the neck was identified, but there were 6 cases where there was a difference between quadrant named on scan and surgical/pathology location of diseased gland. True negatives were only assigned to pathologically normal glands and this sample was limited. Unfortunately, the study team was unable to determine the specificity and NPV in the study as it was designed. There was an inherent bias because the patients studied presumably had chemical HPT and were scheduled for surgery (or biopsy) because of symptomatology. The specificity in the literature for scintigraphy using any method in patients without HPT has been reported in the range of 77-100%.[5]

As noted in other studies, the sensitivity for detecting adenomas was much higher than for hyperplasia. While the MIBI scans were accurate in picking up disease, they were not as accurate in differentiating adenoma from hyperplasia. The difference in gland size may be a factor. The most obvious hazard in this scenario is that the neck exploration will be stopped after the abnormal gland(s) identified by scan is removed, leaving behind unsuspected hyperplastic glands that will need to be removed at subsequent surgery.

A proposed benefit to preoperative scanning is a decrease in operative time.[8] If the scan clearly documents a single adenoma, the opposite side may not need to be explored. This benefit, however, has not been universally supported.[1] In this study, the mean operating time from incision to skin closure was 107.7 ± 33.9 minutes (range 56-185 minutes). A comparison group of patients who had parathyroid surgery without preoperative MIBI imaging was not drawn due to the different number of surgeons performing the operations and the multiple hospitals that were involved in this study. Thus, whether preoperative imaging can actually decrease operative time could not be validated from this study data.

Finally, there is controversy over the routine use of the MIBI scan, debating the benefits to the patient and surgeon versus the expense of the test, and the true surgical advantage provided by its use preoperatively. A quote frequently used in this debate is that "the only localization needed prior to surgery is to locate an experienced parathyroid surgeon."[5,14] Whether these localization tests should be used in all patients, or reserved for those undergoing repeated exploration is currently being debated. One side recommends the use of this scan as a preoperative exam only in cases of reoperation for persistent or recurring hyperparathyroidism,[1,5,6,11] while others feel that preoperative localization in initial neck operations is useful.[10] Concurrent with the debate over patient selection are many issues regarding technique, to include the optimum imaging protocol, radiotracers used alone or in combination, and time frames from dosing to imaging.

Summary

Sestamibi parathyroid imaging is relatively new, but seems to be a significant improvement over previously reported scintographic techniques. In our local experience, it has a 90% sensitivity in detecting an abnormal (enlarged) parathyroid gland, but is less reliable in actually differentiating an adenoma from hyperplasia. The local experience in Hawaii confirms published data. Sestamibi scans overestimates adenoma (sensitivity 95%, PPV 76%) and underestimates hyperplasia (sensitivity 45%, PPV 100%). There were two false positives and three false negatives for HPT (in the literature, false positives tend to occur with thyroid nodules and false negatives with smaller glands of hyperplasia).[5] Of the 33 patients in our study, 25 had primary HPT and 8 had secondary HPT with ESRD. A small subpopulation of 3 patients had previous thyroid or parathyroid surgery. No ectopic glands occurred in this study. Adenoma could not be reliably differentiated from hyperplasia in the study population.

Despite the excellent results of the MIBI scan, it is unclear and still controversial whether this accuracy can compete with the even

Continued on Page 120



Benzamycin® works faster

For visible results in as little as 2 weeks.[1]

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- Large size (46.6 g) for added convenience.



than the speed of life.

Adverse conditions infrequently reported include dryness, erythema, and pruritus.

Artistic representation, not an actual case. Treatment outcomes vary.

Please see references and prescribing information on adjacent page.

BENZAMYCIN® Topical Gel

(3% erythromycin, 5% benzoyl peroxide)

Better results faster[3]

Benzamycin®
(erythromycin-benzoyl peroxide topical gel)
Topical gel: erythromycin (3%), benzoyl peroxide (5%)
For Dermatological Use Only – Not for Ophthalmic Use
Reconstitute Before Dispensing

Brief Summary–Consult package insert for full prescribing information.

INDICATIONS AND USAGE
BENZAMYCIN® Topical Gel is indicated for the topical treatment of acne vulgaris.

CONTRAINDICATIONS
BENZAMYCIN® Topical Gel is contraindicated in those individuals who have shown hypersensitivity to any of its components.

WARNINGS
Pseudomembranous colitis has been reported with nearly all antibacterial agents, including erythromycin, and may range in severity from mild to life-threatening. Therefore, it is important to consider this diagnosis in patients who present with diarrhea subsequent to the administration of antibacterial agents.
Treatment with antibacterial agents alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by Clostridium difficile is one primary cause of "antibiotic-associated colitis."
After the diagnosis of pseudomembranous colitis has been established, therapeutic measures should be initiated. Mild cases of pseudomembranous colitis usually respond to drug discontinuation alone. In moderate to severe cases, consideration should be given to management with fluids and electrolytes, protein supplementation and treatment with an antibacterial drug clinically effective against C. difficile colitis.

PRECAUTIONS
General: For topical use only; not for ophthalmic use. Concomitant topical acne therapy should be used with caution because a possible cumulative irritancy effect may occur, especially with the use of peeling, desquamating or abrasive agents. If severe irritation develops, discontinue use and institute appropriate therapy.
The use of antibiotic agents may be associated with the overgrowth of nonsusceptible organisms including fungi. If this occurs, discontinue use and take appropriate measures.
Avoid contact with eyes and all mucous membranes.
Information for Patients: Patients using BENZAMYCIN® Topical Gel should receive the following information and instructions:
1. This medication is to be used as directed by the physician. It is for external use only. Avoid contact with the eyes, nose, mouth, and all mucous membranes.
2. This medication should not be used for any disorder other than that for which it was prescribed.
3. Patients should not use any other topical acne preparation unless otherwise directed by physician.
4 Patients should report to their physician any signs of local adverse reactions.
5. BENZAMYCIN® Topical Gel may bleach hair or colored fabric.
6. Keep product refrigerated and discard after 3 months.

CARCINOGENESIS, MUTAGENESIS AND IMPAIRMENT OF FERTILITY
Data from a study using mice known to be highly susceptible to cancer suggests that benzoyl peroxide acts as a tumor promoter. The clinical significance of this is unknown.
No animal studies have been performed to evaluate the carcinogenic and mutagenic potential or effects on fertility of topical erythromycin. However, long-term (2-year) oral studies in rats with erythromycin ethylsuccinate and erythromycin base did not provide evidence of tumorigenicity. There was no apparent effect on male or female fertility in rats fed erythromycin (base) at levels up to 0.25% of diet.
Pregnancy: Teratogenic Effects: Pregnancy CATEGORY C: Animal reproduction studies have not been conducted with BENZAMYCIN® Topical Gel or benzoyl peroxide.
There was no evidence of teratogenicity or any other adverse effect on reproduction in female rats fed erythromycin base (up to 0.25% diet) prior to and during mating, during gestation and through weaning of two successive litters.
There are no well-controlled trials in pregnant women with BENZAMYCIN® Topical Gel. It also is not known whether BENZAMYCIN® Topical Gel can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. BENZAMYCIN® Topical Gel should be given to a pregnant woman only if clearly needed.

Nursing Women: It is not known whether BENZAMYCIN® Topical Gel is excreted in human milk after topical application. However, erythromycin is excreted in human milk following oral and parenteral erythromycin administration. Therefore, caution should be exercised when erythromycin is administered to a nursing woman.

Pediatric Use: Safety and effectiveness of this product in pediatric patients below the age of 12 have not been established.

ADVERSE REACTIONS
In controlled clinical trials, the total incidence of adverse reactions associated with the use of BENZAMYCIN® Topical Gel was approximately 3%. These were dryness and urticarial reaction.
The following additional local adverse reactions have been reported occasionally: irritation of the skin including peeling, itching, burning sensation, erythema, inflammation of the face, eyes and nose, and irritation of the eyes. Skin discoloration, oiliness and tenderness of the skin have also been reported.

DOSAGE AND ADMINISTRATION
BENZAMYCIN® TopMical Gel should be applied twice daily, morning and evening, or as directed by a physician, to affected areas after the skin is thoroughly washed, rinsed with warm water and gently patted dry.

Important to the Pharmacist
Prior to dispensing, tap vial until powder flows freely. Add indicated amount of ethyl alcohol (70%) to vial (to the mark) and immediately shake to completely dissolve erythromycin. Add this solution to gel and stir until homogeneous in appearance (1 to 1½ minutes). BENZAMYCIN® Topical Gel should then be stored under refrigeration. Do not freeze. Place a 3-month expiration date on the label.

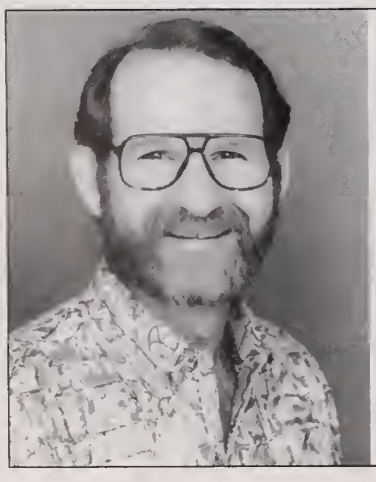
NOTE: ***Prior to reconstitution, store at room temperature between 15° and 30°C (59° – 86°F).***
***After reconstitution,* store under refrigeration between 2° and 8°C (36° – 46°F).**
Do not freeze. Keep tightly closed. Keep out of the reach of children.

Caution: Federal (U.S.A.) law prohibits dispensing without prescription.
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Multi-Center Sestamibi Parathyroid Imaging Study in Hawaii

Continued from Page 117

better success of an experienced surgeon in initial surgeries for HPT. Some argue preoperative localization for HPT is probably not justified. There may, however, be a role for preoperative localization in patients with recurrent HPT and previous parathyroid or thyroid neck surgery. Controversy aside, MIBI scan in most cases may still be the best technique in nuclear medicine for detecting abnormal parathyroid glands.

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"KITS" for Improved Immunization of Kauai Children

Sally Jo Manea BSN, GCPH; State of Hawaii Department of Health, Kauai District Office

Kauai physicians and District Health Office staff established a computerized tracking system in 1993 to improve immunization rates in Kauai-born infants. Comparison of 1995 and 1996 audit results of 1993- and 1994-born children showed completion rates for 9 antigens rose from 76% to 86%. Evolution and improvement of the tracking system are discussed. Recommendations for physicians are offered.

Introduction

A state-wide retrospective immunization survey in 1993 showed an average of 61% of Hawaii kindergartners completely immunized with 4 diptheria-tetanus-pertussis (DTP), 3 oral polio vaccine (OPV), and 1 measles-mumps-rubella (MMR) by the age of 24 months.[1] National Year 2000 Health Objectives include the objective of having series-complete immunizations for 90% of two-year-olds.[2] To accomplish this objective for Kauai, an intervention project was designed and implemented by Kauai District Health Office (KDHO) staff in 1993. The computerized Kauai Immunization Tracking System (KITS) initiated an immunization record on each child born on Kauai based on birth certificate data. Immunization data from physicians and clinics were entered into the system. Computer-generated reminder letters were sent to parents of children determined by KITS to be due for immunizations. Periodic reports identifying overdue children were sent to physicians. KDHO staff manually audited provider records and recommended strategies for improving immunization levels. The 1995 and 1996 audits of 1993 and 1994 born children, respectively, are reported in this paper, and the evolution and improvement of the tracking system are discussed.

Send requests for reprints to:
Sally Jo Manea
Kauai District Health Office
Epidemiology Branch
3040 Umi Street
Lihue, HI 96766

Methods

Children born in 1993 followed through the KITS database were analyzed in November of 1995 in the following way:

1) Lists of overdue children were distributed to each physician.

2) Immunization records were reviewed by KDHO epidemiology and nursing staff. Children who had moved away or died were removed from tracking, and records were updated for those who had been immunized.

3) Each physician was sent a report on audit results which included a chart of all physicians with immunization levels of the children in each practice.

4) Individual worksheets on overdue children were included in the physician's report to facilitate immunizing delinquent children. Staff were asked to send updated information to KITS.

5) Data were re-analyzed 3 months after physicians were notified of their overdue patients and an additional report was generated.

Children born on Kauai in 1994 were analyzed in November of 1996 by the same method noted above in numbers 1 and 2. The results reported here are a comparison of the November 1995 and 1996 audits.

Results

The November 1995 audit of 1993-born children reported 927 births, 114 (12%) of whom had moved away or died, leaving 813 residents. A total of 617 (76%) were completely immunized with 9 antigens, including 4 DTP/ HiB, 3 hepatitis B/OPV and 1 MMR. The November 1996 audit of 1994-born showed 885 births, 117 (13%) of whom had moved away or died. Of 768 residents, 660 (86%) were completely immunized with 9 antigens (Figure 1). Figures 2 and 3 show comparisons of 1995 and 1996 audit results with physicians grouped according to the number of children tracked in KITS.

Discussion

Several changes implemented during 1995 and early 1996 streamlined and improved KITS. The power of physician audits was recognized and utilized. To improve efficiency, the parent letter was changed from a reminder sent to all parents to a recall for only those who were overdue. Physicians requested assistance with notification of parents who missed appointments, and asked to be sent KITS worksheets on individual patients to assist in their efforts. Physicians were unaware of the extent of missed opportunities among their patients and responded to information presented at audit report sessions by reducing missed opportunities.

The November 1995 audit report notified physicians of overdue

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Fig. 1—Number of Kauai Births, Residents, and Percent of Infants Completely* Immunized for Birth Years 1993 and 1994

	11/95 audit, 1993-born	3/96 audit, 1993-born	11/96 audit, 1994-born
Births	927	927	885
Number moved/died	114	120	117
Residents	813	807	768
Number Complete	617	674	660
Percent Complete	76%	84%	86%

* 4 DTP/HiB, 3 Hep B/OPV, 1 MMR

patients by name, and subsequent efforts to immunize these children brought the overall level from 76% to 84% complete, as documented by a post audit dated 3/96 (see Figure 1). Physicians requested regular KITS worksheets showing child's name, birth date, phone number and "due" and "done" date spaces for each immunization. They returned worksheets to KDHO with updated data. These worksheets were sent periodically during 1996 as overdue children were discovered during data entry. The KITS worksheets became routine, and may be one factor that improved immunization levels.

In 1995, KITS changed from a reminder to a recall system. Previously, personalized reminder letters were sent to parents when children reached age 2, 4, 6 and 12-15 months stating "your child will be due for the following immunizations on the date shown". This was determined to be inefficient, as most parents kept well baby appointments.[3] Physicians preferred that KITS assist by notifying parents who missed appointments, so the letter format was changed to read "your child was due...on the date shown" and letters were generated monthly for children who were overdue by 60 or more days.

During physician record audits, information was recorded about missed immunization opportunities. During 1996, presentations were made to physicians and nurses at Kauai's largest clinics at which immunization status and visit records of overdue children were displayed and discussed, and recommendations made for reducing missed opportunities. These presentations, along with the annual audit report stimulated actions to improve immunization levels.[4]

There were various reasons for children not being immunized. Parents' and physicians' lack of awareness that immunizations were overdue was a significant factor. Of the 768 residents in the 1996 audit, there were 82 under-immunized children. For 49 (60%) of these, one visit to the physician was all that was required for completion. Immunizing these children would result in an overall level for this birth cohort of 93%!

What remained was a small group of children whose parents either refused (4%) or appeared to have social or behavioral problems that required special outreach efforts. Kauai Public Health Clinic records reviewed for the 1996 audit revealed 6 overdue children. Five of the 6 families had been contacted by phone or letter from 3 to 8 times and informed that the child was overdue, and provided with the date and times of the next free clinic in their area, yet none attended.

Fig. 2—Percent of 1993 and 1994 Kauai-born infants completely* immunized by provider (10-50 infants in KITS)

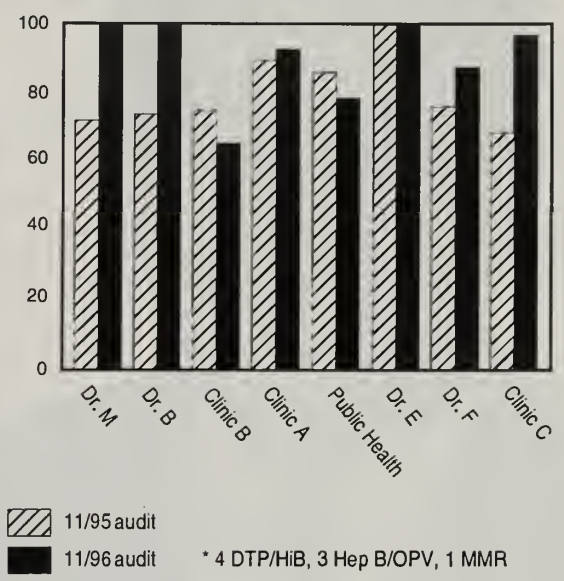
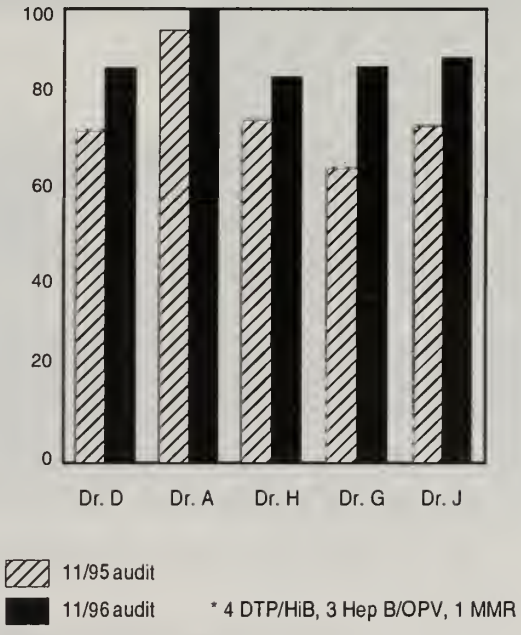


Fig. 3—Percent of 1993 and 1994 Kauai-born infants completely* immunized by provider (>50 infants in KITS)



Conclusion and Recommendations

A combination of interventions, conducted over an extended period of time, and remodeled based on the community, improved immunization levels of Kauai children.[3,4,5] Admirable progress was

Continued on Page 128



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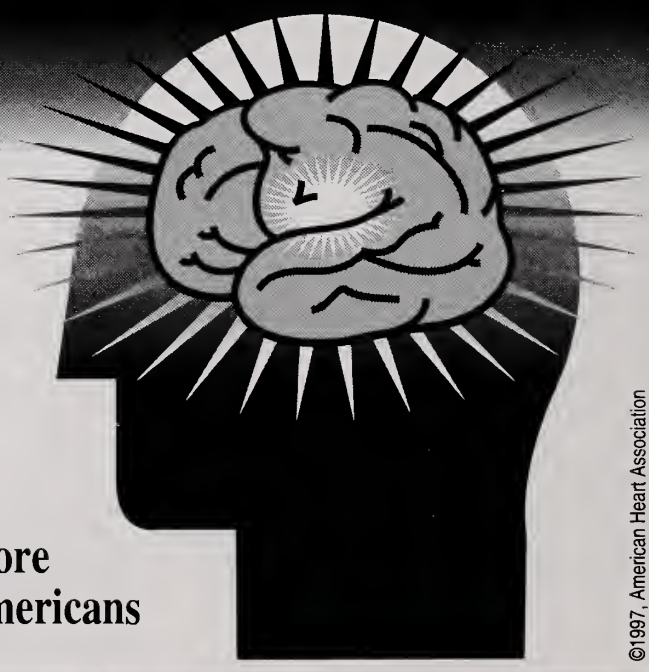
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- **28 percent of those who suffer a brain attack are under 65**
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- **African-Americans are 2.5 times more likely to die of stroke than white Americans**

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News and Notes Henry N. Yokoyama MD

Life in these parts

Physician Moves

General Surgeon **Brandt Lapschies** opened his private practice at Kapiolani Medical Center, POB Suite 1150.

Pediatrician **Harald Nilsson** opened his private practice at 1350 S. King St., Suite 300. (Harald's wife is Straub internist Lois Saruwatari)

Richard Creagan, MD, FACEP, board certified in emergency medicine joined *Hunalalai* Urgent Care as medical director. Five board certified physicians formed the West Hawaii Medical Group (in Kailua-Kona); viz dermatologist **Joy McElroy**, internist **Lois Chang-Stromen**, dermatologist **John Dilley**, urgent care **Richard Creagan** and orthopod **Martin Jackier**.

Medical Tid Bits

Canadian researchers reported in the March 5 *JAMA* that steroid asthma inhalants cause glaucoma in older people. Eye patients in Quebec had a 44% increased risk when using steroid inhalants longer than 3 months. (Co-author **Samy Suissa**, McGill University professor pleads, "Don't stop using these medications. We don't want to fill up our emergency rooms in Canada and in the U.S. with patients with asthma attack because they stopped their medication.")

The same *JAMA* reports that angioplasty offers about the same quality of life and relief from symptoms after five years as by pass surgery. The study admits that angioplasty patients often need repeat procedures. **George Sopko** of the National Heart, Lung and Blood Institute in Bethesda, MD headed the research.

Miscellany

The exhausted business man stepped in a Tokyo bar for a drink.

"Speak English?" he asked the bartender.

"Yes sir."

"Great. I'd like a Stoli with a twist."

The barkeep looked at him for a moment, then leaned over the bar.

"OK, once upon a time there were four little pigs."

Playboy March '97

Why are educators so concerned about the graduating class of economists? The majority believe Prozac ended the Great Depression."

A popular restaurant owner in Beijing had a secret recipe, but it's a secret no more. He would sprinkle opium on his special dishes. The customers left happy and always came back.

(From Paul Harvey News)

Conference Notes

"All that Wheezes is not Asthma: Dx and Rx of Wheezing Disorders."

Visiting Professor **Michael Iseman** from the National Jewish Center of Immunology and Respiratory Medicine, Denver, Colorado. QMC Friday morning, March 7.

I. Asthma

General discussion:

A. impact of asthma:
Rising morbidity and mortality despite improved therapies available.

B. Spectrum

Mild		Moderate	Severe
Mild Intermittent	Mild Persistent	Moderate Persistent	Severe Persistent

*Add regular preventive therapy to any category above "mild intermittent"

Regular preventive therapy required when:
- Sy's are chronic
- Exacerbation more than 1-2x/wk
- Beta agonists required daily
- Nocturnal sy's more than 2x/mo
- Evidence of airway obstruction per spirometry

II. Pharmacologic Measures

A. Mild Intermittent
- Sy's less than 2x/wk
- PFT's near normal;
- usually a/c airway inflammation;
- probably adequate therapy with beta agonist

B . Mild Persistent
Combined bronchodilation and anti-inflammatory Rx.

1. Short Acting Beta Agonists
 - Albuterol
 - Terbutaline
 - Metaproterenol
 - Dobutamine
2. Anti-inflammatory agents
 - Inhaled steroids: Betamethasone; triamcinolone
 - Cromolyn or Nedocromil: "Anti-inflammatory"; little or no side effects, even mild efficiency

C. Moderate Persistent
(Sy's with bronchodiliators and low to moderate dose inhaled steroids; frequent nocturnal sy's.)

Use Short Acting Bronchodilators plus:
- long acting theophylline
- long acting Beta agonist (Serevant)
- inhaled steroids at increasing doses (up to 2000 mcg)
- short term oral steroids

Remarks: Theophylline has come to life again. Servevant has long term overnight effect. "Inhaled Steroid War."

re Short term oral steroids: We were taught to give in am. "Only quacks give twice a day. The Magic Time is 3 p.m. It blocks the nocturnal process; increasing inhaled steroids dosing is controversial. One study shows only nominal improvement in symptoms compared to Serevant. There is increased risk of side effects with doses 1000 to 2000 mcg/d.

re Serevant: Effective 12 hours or more. Must be used with short acting beta agonist and anti-inflammatory agents. Marketed in bid dose, but dose hs helpful in nocturnal asthma. If patient requires proventil/ventolin 4xs a day, discontinue Serevant.

re Long Acting Theophylline: Also improves nocturnal sy's. Many patients take only hs. May have anti-inflammatory effect as well.

re Zilantin: Useful in ASA induced asthma, cold air induced asthma, exercise induced asthma. "Zinlantin makes asthma better." Effective in nocturnal and daily asthma. Reduces theophylline dose by 50%. ALT rises in 4-6%.

re Zafirlukast (Accolate): Useful in patients ages 12 to 70; 1/2 life 10 hrs; T max 3 hrs; no side effects with common asthma treatment; reduces nocturnal sy's by 20% and day time sy's by 29%.

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re Clinical Aspects of Problem Asthma:

- GERD: 2° asthma therapy; prednisone, analgesics.
- Adult Asthma Triggers:
 G - GERD
 A - Analgesics
 U - Upper respiratory infection
 S - Sinusitis
 S - Sleep
 Rx Sinusitis: Nasal saline washings; nasal steroids; Claritin
- Adult Asthma Triggers:
 S - Stress
 A - Allergic; Aspergillosis (bronchopulmonary)
 M - Metabisulfite
 B - Beta blockers
 O - Occupational/Industrial/hobby

re Vocal Cord Dysfunctional Syndrome (Conversion reactions): Common in women, health professionals.

PRK Report

(Gleaned from a Mid Week report by reporter Carol Chang)

At least 130 Hawaii eye doctors do PRK (photorefractory keratotomy) at two laser eye surgery centers viz the Laser Eye Institute and the True Vision Laser Center. Statistics: 95% of PRK patients improve their vision to 20/40 (required for unrestricted driver's license); and 80% can expect 20/20 vision (500,000 surgeries have been done in the past decade).

In PRK, the retinal "zapping" lasts less than 60 seconds and costs at least $2,000 per eye. The entire process takes 15 minutes and the results are permanent. Most health plans do not pay for the procedure since it is considered cosmetic surgery.

The Food and Drug Administration (FDA) has approved PRK only for "mildly nearsightedness." Ophthalmologists **John Olkowski and Pierre Pang** feel that severe near-sightedness, astigmatism, and even far-sightedness may become correctable within the year as LASIK technology passes the FDA hurdle. LASIK combines classic surgery (with a diamond tipped scalpel) with the PRK laser beam. A flap of the cornea surface is cut and temporarily rolled aside, exposing the internal tissue for the laser to vaporize. When finished, the surface flap is reattached and left to heal.

Pierre Pang had LASIK surgery 6 months ago in Colombia and now has 20/20 vision. "It's like a miracle that I can see so well without my glasses. It's great."

Miscarriage and Depression

(Gleaned from Wes Young's column "Checkup on Health" February 19)

Joyce Nakamura, chief of OB&Gyn at Kaiser Permanente notes: that miscarriages are relatively common and are reported in about 20% of pregnancies during the first three months. "A miscarriage interferes with their life plans. Today, when a miscarriage occurs, a lot of people do not talk about it. A woman needs to go through the steps of the grieving process—anger, denial, bargaining and gradually acceptance. A lot of people do not realize that a mother has lost a part of herself. I tell them that it is OK to cry about it." If you cannot function after three to six weeks, we have to start to wonder if there is a problem and you should have a reality check with your primary physician. If he says "This has been going on a long time," it may be time to get psychiatric help.

Psychiatrist **Yuko Kusaka's** experiences with depression and miscarriage are both professional and personal. She explains that mourning does occur with a miscarriage since a miscarriage disrupts a prospective mother's immediate hopes and plans for a child. On a personal level, Kusaka relates that she had a miscarriage when her first child was 2 years old. "I was in my late 30's. If I had not had a child already, I would have been devastated. I can understand why some individuals feel this way, especially if they feel their biological clock ticking and have not yet had a child. Two or three miscarriages in a row can be especially difficult."

Families should be aware of the differences between the normal mourning process and a complicated bereavement process with major depression for which professional advice and treatment is needed. One difference is that when mourning, prospective parents feel sad and lonely, but they do not blame themselves for their loss. Individuals who develop a major depression inappropriately blame themselves. The signs of severe depression include being non-functional in all areas of life and feeling depressed almost everyday. Such individuals lack interest in almost everything. They have no hope and stop trying to get better. Warning signs include prolonged loss of sex drive, lack of energy, difficulty sleeping, inability to concentrate, argumentative behavior, social withdrawal, drug or alcohol abuse and recurring thoughts of suicide. Kusaka observes that Asian women seem to have problems because of the great importance placed on having children.



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American Heart Association - Hawaii Affiliate

May is Stroke Awareness Month - *1997 Activities*

May 10
Stroke Awareness for the Public
Dr. Melvin Yee & Dr. Web Ross
1:00 p.m. to 4:00 p.m.
Kuakini Hospital
Auditorium

May 13
Stroke Awareness for the Public
Dr. Marek Mirski
6:30 p.m. to 8 p.m.
Queen's Medical Center
Tinney Theater

May 14
Stroke Awareness for Health Professionals
Dr. Web Ross
12:00 p.m., V.A. Hospital,
Prince Kuhio Federal Building
300 Ala Moana Blvd., Rm 6307

May 17
Stroke Awareness for the Public
(Risk Factors, Atrial Fibrillation, Anticoagulant Therapy)
Dr. Leo Maher
2 p.m., Straub Clinic & Hospital
Doctor's Dinning Room

May 30
Stroke Awareness for Health Professionals
Dr. Stan Au
(Time TBA), St. Francis Medical Center
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"Kits" for Improved Immunization of Kauai Children

Continued From Page 123

made toward the National Year 2000 Objective of 90% series-complete immunization by age 2 years. Kauai physicians and nurses deserve special recognition and congratulations for their efforts during 1996. Additional effort is needed to reach the 90% goal, and the following recommendations are intended to assist in focusing that effort.

1) All clinics should initiate their own recall systems to determine which infants have missed immunization appointments, and reschedule appointments to catch-up missed immunizations.[3,5,6]

2) The most frequently missed immunizations are the 12-15 month MMR, DTP and HiB.[1,7] Physicians should initiate a reminder system to parents for this visit.

3) Children should be immunized at appropriate times unless the child is seriously ill. If the physician chooses not to immunize a child who comes for a "sick" visit, the reason should be documented, an appointment for the immunization made for a few days later, and a staff member designated to follow through if the child misses the appointment.

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Patient-Physician Covenant

Medicine is, at its center, a moral enterprise grounded in a covenant of trust. This covenant obliges physicians to be competent and to use their competence in the patient's best interests. Physicians, therefore, are both intellectually and morally obliged to act as advocates for the sick wherever their welfare is threatened and for their health at all times.

Today, this covenant of trust is significantly threatened. From within, there is growing legitimation of the physician's materialistic self-interest; from without, for-profit forces press the doctor into the role of commercial agent to enhance the profitability of health care organizations. Such distortions of the doctor's responsibility degrade the doctor/patient relationship which is the central element and structure of clinical care. To capitulate to these alterations of the trust relationship is to significantly alter the doctor's role as healer, carer, helper and advocate for the sick, and for the health of all.

By its traditions and very nature, medicine is a special kind of human activity—one which cannot be pursued effectively without the virtues of humility, honesty, intellectual integrity, compassion and effacement of excessive self-interest. These traits mark doctors as members of a moral community dedicated to something other than its own self-interest.

Our first obligation must be to serve the good of those persons who seek our help and trust us to provide it. Physicians, as physicians, are not and must never be commercial entrepreneurs, gateclosers, or agents of fiscal policy that runs counter to our trust. Any defection from primacy of the patient's well-being places the patient at risk by treatment which may compromise quality of or access to medical care.

We believe the medical profession must reaffirm the primacy of its obligation to the patient through national, state, and local professional societies, our academic, research and hospital organizations, and especially through personal behavior. As advocates for the promotion of health and support of the sick we are called upon to discuss, defend and promulgate medical care by every ethical means available. Only by caring and advocating for the patient can the integrity of our profession be affirmed. Thus we honor our covenant of trust with patients.

This Covenant was produced by a group of American doctors including Dr. David Rogers (recently deceased) who was former Dean of Medicine at Johns Hopkins and former President of the Robert Wood Johnson Foundation and also including Dr. Christine Cassel, who is now Professor of Medicine at the University of Chicago. Dr. Edmund Pelligrino, Director for the Advanced Study of Ethics at Georgetown University, and Dr. George Lundberg, Editor of the Journal of the American Medical Association, also participated in its development. Dr. Roger Bulger, President of the Association of Academic Health Centers, and Dr. Ralph Crashaw, a practicing psychiatrist in Oregon who has been active locally and nationally in ethical issues that pertain to physicians, were also co-authors. Finally, Dr. Lonnie Bristow, the President of the American Medical Association, and Dr. Jeremiah Barondess, the President of the New York Academy of Medicine, are authors.

The Weathervane

Russell T. Stodd MD

Usually, terrible things that are done in the name of progress are not really progress, but just terrible things. *(R. Baker)*

The cloning of an ewe from the DNA of an adult sheep in Scotland has alarmed ethicists and a wide range of special interest groups from anti-abortion activists to the Roman Catholic Church, not to mention animal rights people. Theoretically, there is no reason why the technique would not work with any mammal, including human beings. While the thought of cloning a human being is rejected as "unthinkable," society is fascinated at the prospect of genetic technology. If the process can be repeated, regulations will necessarily have to be installed. The frightening aspect is that people will always find a way to get around regulations, and "The Boys from Brazil" will come closer to reality.

There is no expedient to which a man or woman will not go to avoid the labor of thinking.

What if a patient suffers because he or she couldn't get the immediate care needed? Example: a patient with a retinal detachment thinks he needs new glasses due to decreased visual acuity, and calls for an appointment. A delay in diagnosis and treatment results, and the patient loses useful vision. Would the doctor be liable? Oh yes, because it is assumed that the person answering the phone has the medical expertise to recognize conditions which require prompt attention. This problem generated from a managed care triage system, but it could similarly occur in your office. Train your staff.

A woman needs a man like a fish needs a bicycle.

Doctors are sometimes not ideal family persons. The demands of medical practice with long hours, interruptions, missed family appointments, emotional stress and other factors, often place a strain on family ties. A study published in the *New England Journal of Medicine* found that half of the psychiatrists in the study got divorced, surgeons were second at 33%, the overall average was 29%, and pediatricians, internists and pathologists showed the least number of divorces. Why so high for the shrinks? A divorce lawyer who handles physicians postulates, "It's the pontificating. The spouse gets sick of being married to God."

To be young is to be as one of the immortal gods.

The medical community is horrified and dermatologists are citing grossly increased skin cancer risk, but the kids don't care. Young people know the evils of solar exposure, but like alcohol and tobacco, the youthful attitude is, hey, those diseases are years away, right? So, forget wrinkles and melanoma. The Bo Derek and George Hamilton looks are very much in, and pale skin is so uncool. College kids are showing up on Hawaii's and Florida's beaches using lotions without SPF (skin protection factor). With names like Sizzle, Ultra Sun, and Equatorial Thrust, they are designed to enhance rather than reduce the suns rays. One senior female student from Pittsburgh said, "You're going to die of something eventually. You might as well die tanned."

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Tobacco is a dirty weed - satisfies no normal need - makes you thin, makes you lean - takes the hair right off your bean - the worst darn stuff I've ever seen. *(Hemminger)*

Cigarette maker Liggett has bailed out. The tobacco giants, R.J. Reynolds and Philip Morris, are purple with rage because the small player has opted for a confession that tobacco is addictive. Liggett will submit confirmatory research data, and it admits that advertising is directed toward teens. The bottom line for Liggett is that despite a heavy penalty, the assets of the corporation will be protected. Meanwhile in Washington D.C. the Supreme Court has refused to hear a tobacco combine appeal to set aside a Florida decision which allows the state to sue third parties who may be responsible for Medicaid costs. (Somebody phone our Attorney General.) It is all a legal game with an interminable script, and for certain it will enrich a generation of attorneys. But hey, anything that gets that poisonous tobacco weed properly identified is worthwhile.

A little inaccuracy saves a world of explanation.

Shame on President Clinton and double shame on Congress. In a gesture of attacking the Medicare expenditures, the President is beefing up the fraud units, claiming that billions of dollars are lost to Medicare and Medicaid cheats. Moreover, he and HCFA plan once again to reduce reimbursement to providers. The shame is that this is merely budget dust on the overall picture of Medicare spending with the specter of a massively enlarging Medicare population, and reserves going down. Congress and the President must advance the eligible age for social security and must address the means issue. This is a highly unpopular position to take, (AARP and grey panthers, alert!), and our brave elected representatives simply haven't the guts to take the heat.

Laser -Let's Acquire Some Easy Return.

Photorefractive keratectomy (PRK) and laser therapeutics remain as headline news. 1. **Politics** - The Governor of New Mexico vetoed a bill that would have allowed optometrists to perform PRK, and the Idaho Legislature voted down a measure which would have permitted ODs to use lasers. 2. **Professional** - Robert K. Dougherty, former American Academy of Ophthalmology veep for advocacy, has assumed the job of president and CEO of Pillar Point Partners, the combine that controls excimer laser royalties. Don't forget your roots, Bob. 3. **Business** - Industry analysts estimate that in 1996 U.S. based corporate refractive laser centers collectively lost in excess of $100 million.

Thou shalt not worship any false idols, except Elvis.

Down in the land of grits and hominy, Alabama Judge Roy S. Moore has refused to take down the hand-carved Ten Commandments which is hanging in his courtroom. However, another judge has ruled that the tablets violate the rule of separation of church and state. Enter the Governor: he has vowed to call out the National Guard to keep the plaque in place.

Addenda—

- For eight straight years a Gallup poll has found that the public places pharmacists at the top in ethics and honesty.
- Love is an exploding cigar we willingly smoke.

Aloha, and keep the faith—rts ■

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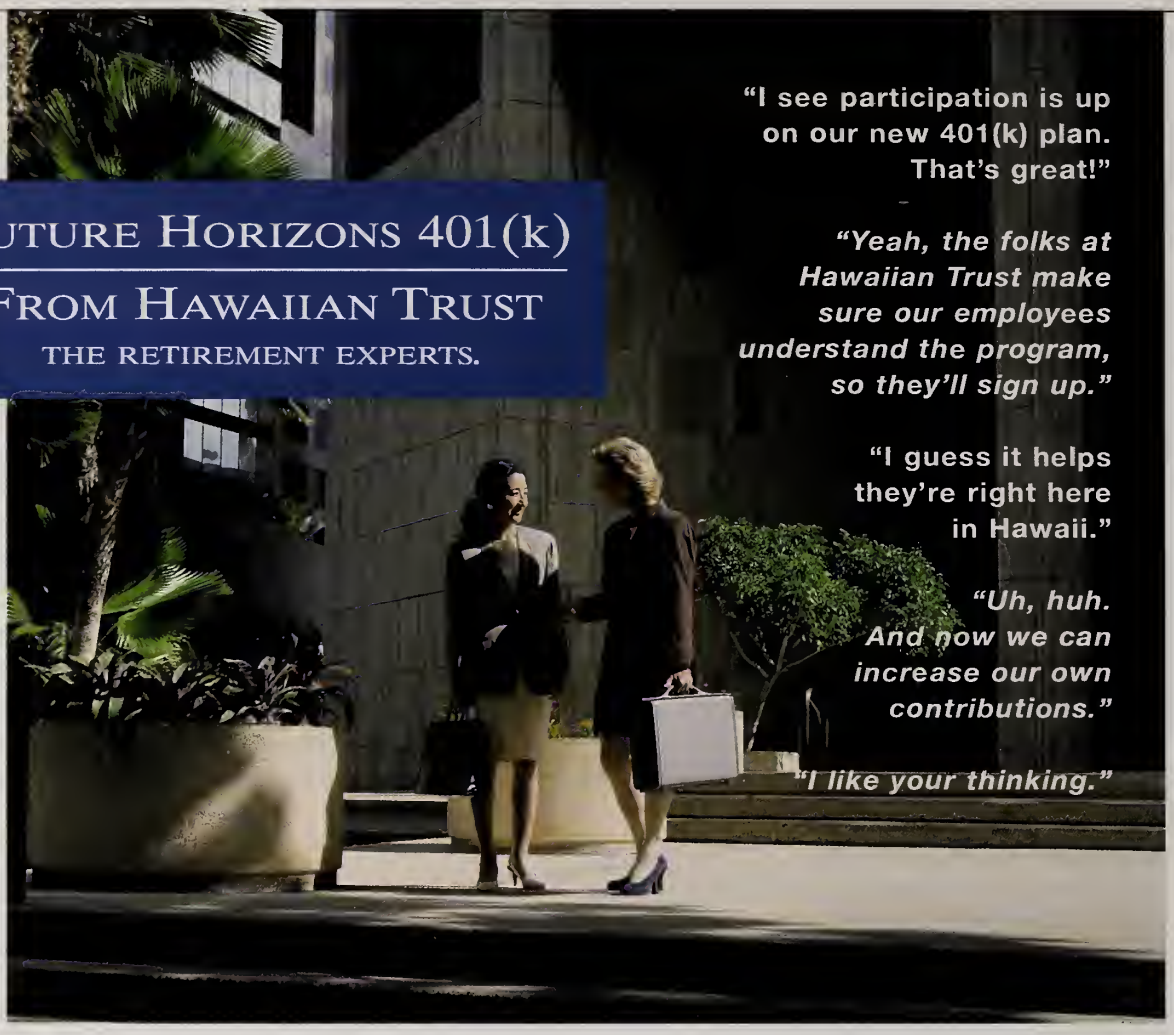
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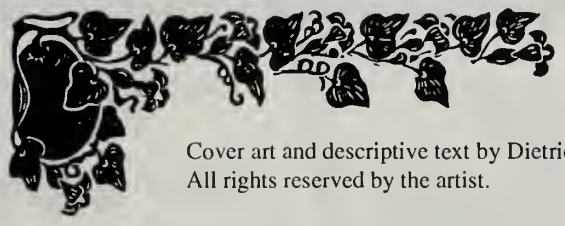
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Hawaiian Wrestlers

Heavy betting was always a part of this Hawaiian sport. Many wrestlers specialized in the art of bone-breaking. They oiled themselves to slip out of grasp.

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Editorial

Congratulations Dr Reginald Ho

Norman Goldstein MD, F.A.C.P.
Clinical Professor, Medicine (Dermatology)
John A. Burns School of Medicine
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Dr Reginald Ho

For the first time the prestigious LaSalle D. Leffall Jr. Award has been given to a physician from Hawaii, Reginald C.S. Ho, MD, Straub Clinic & Hospital oncologist, was chosen for the honor based on his outstanding and continuing work with cancer patients. Dr Ho received the award April 26 during the 6th Biennial Symposium on Minorities, The Medically Underserved & Cancer in Washington D.C.

In addition to Dr Ho's practice at Straub Clinic & Hospital, he is a Clinical Professor of Medicine at the John A. Burns School of Medicine, University of Hawaii and a Clinical Science Adjunct Professor at the Cancer Research Center of Hawaii. He also sits on the Intercultural Cancer Council, is a Co-investor with the PLCO (Prostate, Lung, Colorectal and Ovarian Cancer Screening Trial), and is a past national president of the American Cancer Society. Dr Ho is widely known for his treatment of pain in cancer patients which he promoted during his tenure as national president of the ACS in 1993. Dr. Reginald Ho was also Hawaii Medical Association Physician of the Year in 1994. The LaSalle D. Leffall Jr. Award is given to an individual who has distinguished him/herself in addressing the cancer crisis in minorities or under-served communities through educational programs, clinical service, research, or public awareness. During Dr Ho's term as ACS National President, he was concerned about the national surveys which showed that pain in cancer patients was inadequately treated and that most patients dying of cancer died in pain.

"These surveys came out of not only city hospitals but from our most prestigious cancer hospitals as well," Dr Ho states. Following the survey, he organized a task force of experts in cancer pain who helped the ACS develop a program to address this issue.

Dr Ho believes that cancer pain was not adequately treated due myths such as; (1) Pain is an expected part of cancer and should be endured, and (2) patients taking narcotics for cancer pain usually become addicted. He states, "No cancer pain should be endured. Cancer pain can be relieved 90% of the time with relatively simple treatments, and with more effort the rest of the time. Patients should not be afraid to take pain medications at the dosages prescribed by their doctors; patients rarely become addicted. It's also very helpful for the cancer patient to develop a positive attitude with meditation and prayer. And, I recommend that cancer patients understand their right to expect pain relief."

Look for our special issue on Pain.

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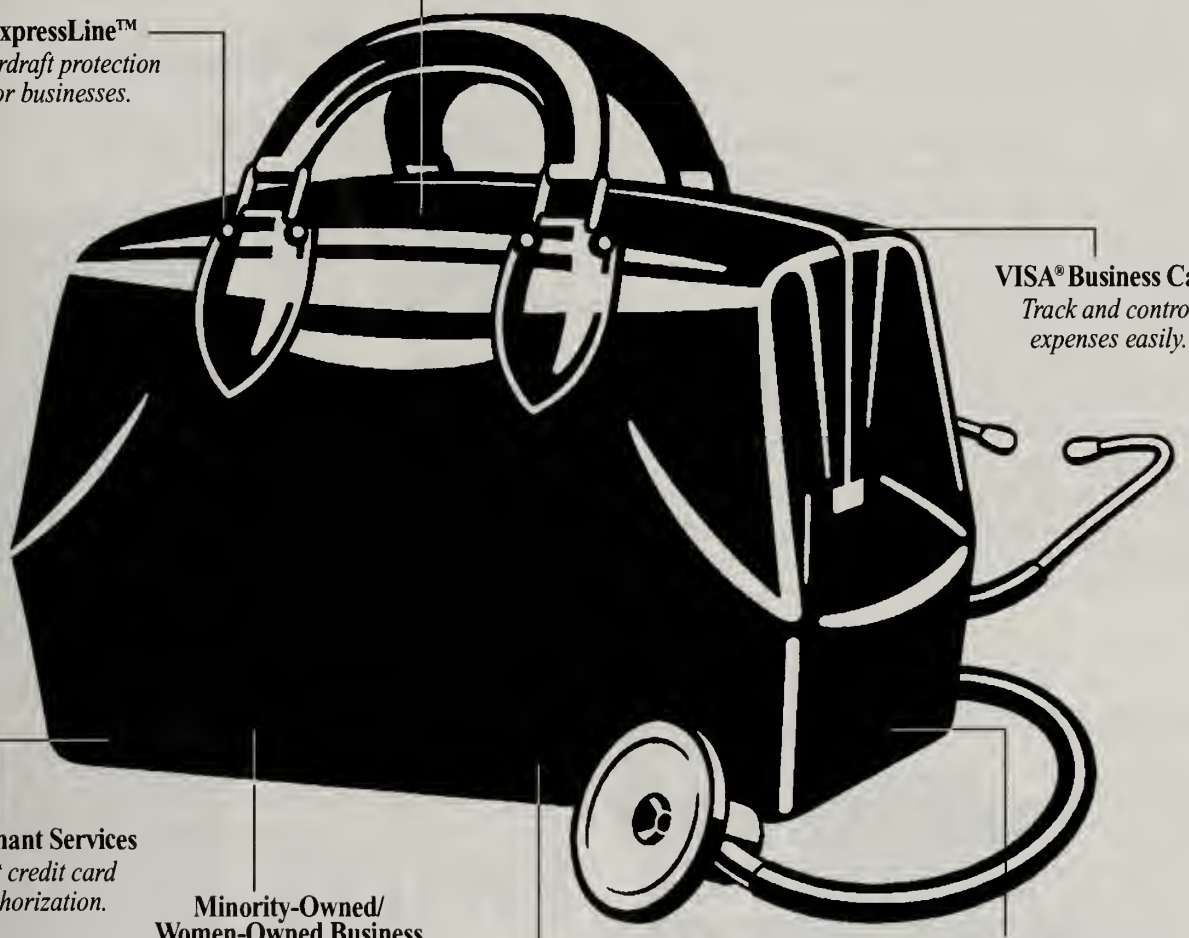
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Presidents Message

John S. Spangler MD

The Internet seminar held on April 19 was well attended and had good rating by the people attending. We hope to continue with this training.

The symphony orchestra presented a concert April 20 and April 22 which was supported by doctors in the community. I hope more doctors would support the Honolulu symphony.

The Reorganization Task Force meeting with the House of Delegates will have met on May 3 to finish the agenda. Please become informed about the results of this special meeting so that at the next annual meeting the new bylaws may be decided.

The Doctors Ball held on March 29 was the first annual event to celebrate the National Doctors Day. I hope the Alliance will continue to support this event and we also support them by encouraging our significant others to join.

The annual national meeting of the AMA is the latter part of June. Please let our delegates know what actions we hope this House of Delegates will do.

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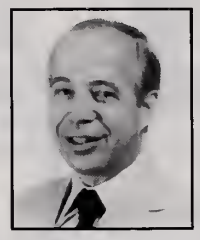
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Commentary

JABSOM Dean Retires

by Satoru Izutsu, PhD
Associate Dean



Dr Christian L. Gulbrandsen

Christian L. Gulbrandsen, MD, Dean of the John A. Burns School of Medicine since 1988, retired on December 29, 1996. His tenure at the School began in 1971 when he was recruited from Harvard Medical School as Professor of Medicine (hematologist/oncologist) to help expand the medical school from a two-year to a four-year degree granting program.

Dean Gulbrandsen considered the people of Hawaii as the School's customers. To serve the community, he led the students, faculty and staff to innovate and achieve goals which many medical schools only dream about. His most notable accomplishment was in leading the faculty to adopt a curriculum, Problem-Based Learning, which empowered student to become critical-thinkers, problem-solvers and life long learners. The curriculum revised the method of teaching and allowed the students to conduct independent study.

It reduced lectures as a principal method of teaching and freed the students from memorizing information. In place of attending lectures in large halls, students met in small groups to identify their agenda for learning. Faculty were retrained to facilitate inquiry and to serve as resources when students formulated questions and sought assistance.

It is significant that students have maintained their standing at the national average in Sept I and Step 2 of the United States Medical Licensing Examination. In addition, graduates have been matched into prestigious residencies across country. Finally, in 1994, the Harvard School of Public Health identified the John A. Burns School of Medicine as one of eight medical schools leading reform of medical education across the country.

Dr Gulbrandsen's goals for the school pointed toward preparing its graduates to meet the challenges of the 21st century. He envisioned a School which would lead the country in tropical medicine, especially with their continued efforts to develop a malaria vaccine; hyper and hypobarism to explore health issues in the depths of the ocean and the height of the atmosphere; rehabilitation principles and techniques to be linked with tourism and sports; and the development of university based programs for the training of health workers in infant and child care, treatment of health problems faced by

university students and the development of programs suitable for the elderly.

He was open to ideas. He never judged others, they judged themselves. Whatever the task, he did it himself first and then convinced others by doing it with them. Once they got the hang of the task, he exited so that there would be a partnership among people to work together.

He believed in the goodness of people. Those who undertook a task to please the Dean became frustrated when they did not get the message that it was themselves that needed to be satisfied, not the Dean. Examples of this philosophy remains in the community in his efforts to create Ke Ola O Hawaii, Papa O Lokahi and establish the community-based clinics. In the school, he initiated the development of the faculty practice plan, the e-mail system and telemedicine. Internationally, a 5-year Medical Officer Training Program (a unique medical school) was conceived in Micronesia between the years of 1986-1996. By December 1996, seventy one physicians, all Micronesians and American Samoans, will have graduated from the Program to serve the Pacific Basin. In addition, agreements of the exchange of medical students have been struck with significant international schools of medicine in Japan, Taiwan, Korea, Hong Kong, China, Thailand, and the Philippines.

His vision was to develop a community which would be a better place in which to live, not because there would be more physicians, but because there would be quality people in the health care professions who genuinely cared about others. He believed in the need for health care reform. As early as 1992, he articulated the historical issues, the current state of health care in the United States, and the required solutions to serve the community.

Dr Gulbrandsen's charismatic leadership will be missed. His legacy is that he has provided the tools for the John A. Burns School of Medicine to enter into the 21st century with confidence.

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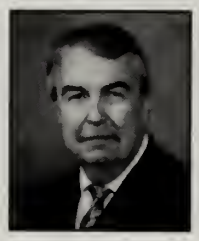
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The Interim Dean



Dr Sherrel L. Hammar

On December 30, 1996, Dr Sherrel L. Hammar became interim Dean of JABSOM. Dr Hammar has been with UH since 1971, and brings with him an extensive background in administration and clinical medicine.

Dr Hammar developed an interest in drama in high school but chose to pursue a career in medicine. At the College of Idaho (now the Albertson College of Idaho), he was active in theater productions and majored in Biology. A special interest in ornithology led to summers on biological field expeditions to the primitive areas of Idaho, Montana, Wyoming, Utah and Mexico. He received his MD degree from the University of Washington School of Medicine (UW), interned at the Minneapolis General Hospital and returned to UW to complete his pediatric residency and a two-year fellowship in Growth and Development with an emphasis on Adolescent Medicine. In 1962, Dr Hammar accepted a faculty position at UW and became the first director of the Adolescent Medicine Program. At the time, adolescent

medicine was a relatively new field and the UW clinic was one of only five clinical training programs.

Dr Hammar also served as assistant and acting director of the UW Child Development and Mental Health Retardation Center, a University Affiliated Facility, from 1964-1965 and 1970-1971. In 1967 he took a sabbatical leave to study techniques of growth assessment in children and adolescents under James Tanner at the Institute of Child Health in London.

In 1971, Dr Hammar joined the JABSOM faculty and was appointed the Director of Ambulatory Services and Chief of Adolescent Medicine at Kauikeolani Children's Hospital. He became the Program Director of the Pediatric Residency Program in 1972 and was appointed the Chairman of the Department of Pediatrics at JABSOM in 1973. Dr Hammar is active with the American Academy of Pediatrics, American Board of Pediatrics (ABP) and with the ABP sub-board of Adolescent Medicine.

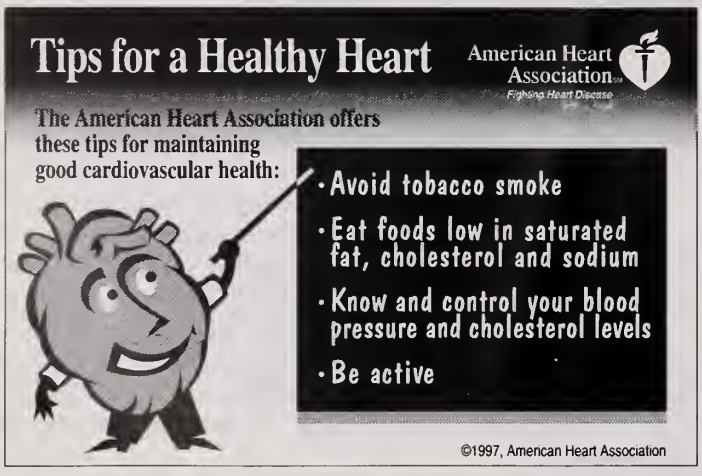
When asked about the future, Dr Hammar replied "I am totally committed to the success of the School of Medicine. JABSOM, like many, has experienced severe financial crises and has had to cope with many changes. These stresses have forced us to critically review our mission and our goals. Our collaboration and close working relationship with the community hospitals and local health care resources has become exceedingly important and has allowed us to survive. This commitment to the School has been very gratifying and we much continue to develop honest, open, non-competitive collaboration and joint ventures with our community partners. Immediate efforts will be to stabilize the School and to assist the faculty with handling the inevitable changes that are occurring in health care and medical education. Shortly, a search committee for a permanent Dean will be established. In the interim, I am very proud to be part of the transition and optimistic about the future."

Editor's Note:

Chris Gulbrandsen has also been a vital member of the Board of Directors of the Hawaii Medical Library. Many thanks, Chris for your years of support.

I know Sherrel Hammar has the same dedication to our Medical School and our library. Our community is blessed to have men like Chris and Sherrel.

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Medical School Hotline

Implications of Genetic Research for Medical Practice and Education

by Elizabeth K. Tam, MD
Associate Professor, Medicine/Pharmacology
John A. Burns School of Medicine
University of Hawaii

How to prepare our physicians and physician trainees for the 21st century? In the 20th century, we witnessed the successes of antibiotics and vaccines and the hope of high technology. The disappearance since World War II of infectious scourges such as smallpox and polio led to the expectation that such remarkable cures and disease eradication would continue. Instead, the diseases that have replaced those epidemics—cancer, heart disease, rheumatologic conditions, diabetes, and psychiatric disorders—have proven much more intractable. There have been undeniable advances in their diagnosis, palliation, and, in the case of some cancers, even cure. By and large, however, the perception is that sophisticated, often expensive procedures have not definitively eradicated or prevented the major scourges of modern society.[3]

Many of these chronic diseases result from complex interactions between genetic makeup, aging, and the environment, a concept emerging from parallel but reverberating lines of research in epidemiology and molecular and cell biology. These findings raise the hope of a more rational approach to medical care and perhaps even primary prevention of disease. Diet, pollutants,aeroallergens, ultraviolet radiation, infectious agents, and other environmental influences are only part of the puzzle; their effects are critically shaped by genetically determined host responses in susceptible individuals. It will be imperative that the physician of the 21st century understand the genetic determinants of disease as well as he/she understands Koch's postulates for infectious disease or physiological mechanisms of organ dysfunction. This vision will direct innovations and curricular emphases in medical education. The advances in genetic and epidemiological research are occurring so rapidly that it is difficult to select what to present in an already packed curriculum. However, a few signal developments can be highlighted to help physicians and trainees understand the fundamental research and its implications for medical care.

The most common afflictions of modern society appear to be complex traits. That is to say, they have a familial tendency that is not attributable to environmental factors alone, that their inheritance pattern does not follow the classic Mendelian patterns characteristic of single-gene diseases (e.g. recessive, dominant, x-linked), and that the trait or disease is most likely governed by several genes which may be modulated by environmental influences, or which may be inherited differently in different families or ethnic groups. Hypertension, atherosclerosis, type II diabetes, and allergic asthma, for instance, share a polygenic and highly variable nature which can confound efforts to elucidate specific genetic elements.

Because of their polygenic nature, the genetic determinants of complex traits are sought using a different approach. The classic

method to find genes responsible for single-gene diseases such as thalassemia is to: identify the clinical trait, determine the pattern of inheritance, find the associated biochemical abnormality, isolate the abnormal protein, determine its amino acid sequence, synthesize a DNA probe based on that sequence, and probe the genomic DNA of affected individuals to locate the abnormal gene. How to determine the genetic basis of a complex polygenic disease in which the multiple biochemical and cellular abnormalities have not been entirely elucidated? In a major departure from the approach used for single-gene disorders, the strategy for complex disorders is to identify the clinical trait or phenotype and delve right into the DNA without necessarily isolating specific biochemical abnormalities in the affected persons.[1,2]

This approach is made possible and productive because many areas of the human genome have now been mapped, some areas in exquisite detail. It is now known not only where genes and gene clusters are, but also the positions of useful genetic markers. These markers are simple sequence repeats (they are called by several similar names)—repeating sequences of 2 to 5 nucleotides which do not encode protein. Over 2,000 simple sequence repeats have already been mapped in the human genome. Their real function is unknown, but they certainly make life easier for genetic cartographers. Indeed, because the position and sequence of each are unique, these repeats serve as longitudes and latitudes on the human genome map.

At least as important, the number of times each sequence repeats varies greatly between individuals. This is a remarkable bonus, because it allows investigators to track how specific genetic elements are inherited. For instance, Dad may have 12 repeats of "D5S436" (a simple sequence repeat on human chromosome 5); Mom may have 6. Depending on how many repeats Junior has, investigators can determine whether he inherited that marker—and any gene close to it—from Mom or from Dad. It can also be determined whether siblings have inherited the same marker from the same parent and are identical by descent at that locus. Using asthma as an example, investigators may surmise that "D5S436" is associated with the phenotypic trait of asthma if 2 siblings with asthma have the same number of repeats of the genetic marker, or if 1 sibling with asthma has 12 repeats and his sibling without asthma has 6 repeats. The strength of this association can be confirmed statistically by studying larger numbers of sibling-pairs. "Sib-pair analysis" is one of the simpler methods of searching for an association between a phenotypic trait and a genetic marker.

There are many permutations of analysis and the genetic markers to be used (when possible, even putative genes are used as markers), but the general search for phenotypic trait-genetic marker associations—sometimes called "positional cloning"— is a fundamental investigative approach which physicians should understand. It is important to remember that the power of this approach derives from painstaking studies in epidemiology and in the physiologic, cellular, and molecular mechanisms of disease, all of which more specifically define phenotypic traits and putative genes.

The hope is that a better understanding of genetic determinants in susceptible populations will allow coherent understanding of how environmental agents interact with qenes to initiate disease. Dietary, hygienic, air quality, or pharmacologic interventions may then be customized for particular groups to achieve more effective and focused management of illness, or even primary prevention of disease. Medicine is already empirical witness to the different efficacy of different classes of anti-hypertensive medications in certain populations. Hopefully, medical education which provides insights into the genetic mechanisms of hypertension and other complex traits will allow physicians to recognize and understand these variations in response to interventions, and to more rationally design management and disease prevention in the 21st century.

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Military Medicine

Seventh Annual Asia Pacific Military Medicine Conference
Kuala Lumpur, Malaysia

by Benjamin Berg MD
Department of Pulmonary Medicine
Tripler Army Medical Center



Indonesian vessels at Melaka

In the capital city of Malaysia, Kuala Lumpur, representatives of over 20 nations attended the 7th annual Asia Pacific Military Medicine conference from 2-7 March. This meeting is a scientific forum for regional Military Medical departments to share information, learn about regional medical issues, and develop closer working relationships. The meeting is annually hosted by a different nation and has been held in Sydney, Australia (1996), Delhi, India (1995), and Honolulu (1994) in recent years. Participation has steadily grown as the U.S. Army Pacific sponsored program has become recognized as a well received, informative and scientifically robust forum.

The theme of this years meeting was "Medical Readiness." Training for medical management of military actions is a complex activity, involving logistical, tactical, and unique operational medical techniques. Medical readiness of a military unit depends largely upon the ability to rapidly transport and sustain medical material, and patient care facilities. Medical intelligence regarding potential endemic disease threats, and appropriate practical management is an integral part of physician readiness. Military physicians routinely receive specialized training in environmental diseases (frostbite, heat stroke, altitude sickness, etc.), tropical and non-tropical infectious diseases, and treatment of biologic, chemical, and nuclear injuries. The mission of many nations Military Medical Departments has evolved to include humanitarian relief and disaster response capabilities.

Presentations in Kuala Lumpur focused on infectious disease threats and research, unique operational environments, and humanitarian missions. Delegates from around the Asia Pacific region presented informative details of regional problems and experiences. Delegates from Nepal discussed hydatid cyst disease and tube thoracostomy in Kathmandu. Representatives from Thailand discussed the impact of deforestation on malaria rates in troops, and effective new malaria control programs were reviewed. Chinese physicians reviewed how the Peoples Liberation Army mobilizes and activates medical facilities when required for wartime missions. A remarkable review of the very effective AIDS prevention program in the Thai Army was enjoyed by the audience. Investigational antimalarial drugs were the subject of a review by the Madagascar delegation. Psychiatric effects of intense conflict were reviewed by the Sri Lanka Air Force Medical delegate. The Malaysian development of an Underwater and Hyperbaric Medicine unit was showcased, and contrasted with a similar presentation by the Royal Australian Navy delegation. Chemical warfare and the medical response to the Sarin terrorist attack was reviewed by the Japanese Self Defense Force. Other presenting nations included Cambodia, Vietnam, Pakistan, India, Indonesia, Russia, Mongolia, Philippines, New Zealand, and others. Most of the Pacific Island nations were represented.

Hawaiian based physicians reviewed the impact of Malaria in the Solomon Islands during W.W.II (Col. Thomas Cashman, TAMC), Telemedicine in the Pacific (Maj Brian Goldsmith TAMC), The Military Role in Complex Humanitarian Emergencies (Adm Dennis I. Wright, Command Surgeon - Pacific Command, Camp Smith), Asthma in the Military (LTC Benjamin W. Berg, TAMC), and many others. Tripler departments of Radiology, Surgery, Medicine, Dentistry, Nutrition, Pediatrics, and Family Practice presented original research and reviews. Medical officers of the 25 Infantry Division (Light) at Schofield Barracks reviewed field experiences in Medical readiness and training exercises in the Pacific region.

The Malaysian hosts proved to be gracious and many enduring friendships were developed. The City of Kuala Lumpur proved an enticing venue for the meeting, and the fabulous cuisine invited long meals and good *esprit de corps*. Kuala Lumpur is a bustling city of 1.3 million people. Explosive growth evident everywhere, with construction of modern skyscrapers and other facilities continuing day and night. A sharp contrast to the small trading post founded by a group of tin miners in 1857. As the tin trade flourished British intervention came, and the Federated Malay States was formed in 1896, with Kuala Lumpur as the capital and seat of British administration.

British influences are palpable throughout Malaysia today, 40 years after independence was gained in 1957. Muslim influences are prominent in architecture, food and custom. Elaborate mosques are interposed with colonial British administration buildings. The sights, sounds, tastes and olfactory delights of the city are exotic, and tantalizing. The influence of the multi-ethnic Malay (Chinese, Indian, Dutch and Malay Bumiputra) population and rich heritage make Kuala Lumpur a remarkably cosmopolitan city, with something for everyone. A visit to the city of Melaka (Malacca) yields a respite from the urban tenor of Kuala Lumpur. There is an abundant history of Dutch influence, South China Sea piracy, and Indonesian trade in this seaside city 2 hours from Kuala Lumpur.

***Correction:**

The article on "Dateline: Boualapha, Laos," which was last published in my column in the HMJ December 1996 issue, was authored by Dr Edward Chu, Department of Medicine, Tripler Army Medical Center.

Information Technology in the Health Care Industry

Ernest J. Prochazka, MD and Shirley J. Daniel, PhD
College of Business Administration, University of Hawaii at Manoa

The health care information systems market has grown to a multi-billion dollar industry, with a predicted average annual growth rate of 12% through the year 2000. This paper provides an overview of information and management technology applications in health care for (a) medical diagnosis and treatment; (b) health care administrative functions; and (c) special applications of information technology to health care problems.

Introduction

In 1968, American hospitals employed 435,100 administrators while caring for 1,378,000 patients on a daily basis. By 1990, the average daily number of patients fell to 853,000 while the number of administrative personnel rose to 1,221,600. In 1990, health expenditures were $666.2 billion: $256 billion on hospital care with $63 billion of those funds going toward administrative expenses.[1] The magnitude of these cost figures and the obvious ballooning of the administrative portion of health care costs point clearly to the need for improved information technologies to manage the system.

Commensurate with the growth of health care costs, the health care information systems market has also grown to between an $11 billion and $23 billion industry in 1996, depending on which items are included, with a predicted average annual growth rate of 12% through the year 2000.[2] Trends indicate that healthcare systems are shifting their information technology investments away from cost-management tools and toward technology facilitating the integration of delivery systems and preparation of managed care.[3] In addition, expenditures on technology to improve clinical outcomes are expected to more than double in the next three to five years, reaching 18% of the total technology budget.

These huge investments in technology are expected to reap heavy benefits. One expert estimates that the potential overall healthcare saving that can be achieved by using information technology is $159 billion.[4] These benefits derive from efficiencies in the way information is used to measure, record, retrieve, diagnose and communicate in the process of patient care and administration.

Many of the advances in health care technology are not arising out of the medical marketplace, but are being driven by either the business world or the entertainment industry. For example, the medical imaging technologies used in computed tomography are based on computer modeling techniques developed in the film industry, which enable people to do three-dimensional reconstructions more rapidly and achieve higher resolution from imaging modalities.[5] Faster and more powerful computers developed for business and engineering applications are also being applied to medicine to allow the management and integration of a myriad of patient record information for higher quality treatment, and more efficient and cost effective health care management.

The purpose of this paper is to provide an overview of information and management technology applications in health care. It is organized into three major sections, which, due to the nature of modern health care management systems, have become highly integrated in practice: (a) the use of information and computer technology in medical diagnosis and treatment; (b) the use of information technology in health care administrative functions; and (c) special applications of information technology to health care problems.

Information and computer technology in medical diagnosis and treatment

Diagnostic and treatment technologies

New technologies for the diagnosis and treatment of disease have dramatically changed the health care industry over the past decade. Diagnostic radiology has become a critical element in patient management and patient care, because early and accurate diagnosis of disease is an essential component of effective therapy. For example, diagnostic tools such as X-ray computed tomography, ultra-sonography, positron emission tomography (PET), single photon emission computed tomography (SPECT), and Magnetic Resonance Imaging (MRI) use advanced techniques with computer-assisted programs to evaluate and shape data to help in clinical decision making. The imaging techniques used in these applications are continuously being improved, resulting in better data acquisition, especially for dynamic MRI[6], and allowing them to replace more invasive procedures. Such diagnostic techniques can provide more and better information at lower risk, and similar or lower cost.[7] As the demand for computer-assisted diagnostic procedures grows, and the technology is applied to a wider variety of medical diagnostic settings, the imaging technology applied will also no doubt improve, and the need for faster, cheaper and more sophisticated computer hardware and software to generate these images will

For correspondence:
Ernest J. Prochazka MD
818 S. King Street
Apt 2005
Honolulu, HI 96813

follow. The use of imaging in health care has prompted several key trends in the field.[8] These include:

* *Digital Image Communications*, which allows the transfer of image data and associated patient and study data in a form understood by anyone.
* *Teleradiology overread services*, through which many radiology groups are increasing their referral base of smaller hospitals by contracting services during evening and weekend hours for overread.
* *Teleradiology on a local basis*, which allows radiologists to render opinions from their homes.
* *Integrated Information and Picture Archival Communication Systems*, which transmit images from radiology to the Intensive Care Unit, Critical Care Unit or Emergency Department for viewing.

Computer technology has also been developed to help doctors predict and visualize the outcome of certain types of treatment. For example, in cosmetic and reconstructive surgery and dentistry, the use of computer modeling helps patients and doctors envision the outcome of certain treatments to assist in making better decisions about treatment options. And computer systems are incorporated into many advanced medical treatments, such as surgeries involving laser technology, the administration of drugs, and various other applications.

Clinical Information Systems

The increased use of digitized medical imaging in diagnosis and treatment, along with the need to achieve economies of scale throughout healthcare networks, has prompted the development of Clinical Information Systems (CIS) or Computer-Based Patient Records (CPR), which allow physicians, nurses, dietitians, social workers, physical therapists and a range of other care-team members to share information about patients directly through the system.[9] Sophisticated CPR systems may require a wide variety of advanced user-to-computer interfaces, including speech recognition, text-to-voice and voice-to-text conversion, barcode scanning, direct digital equipment and application-program interfacing. Other features could include CD-based video recording and playback, microwave broadcast and graphical user interfaces employing voice, pen, mouse and keyboard controls. Such CPR systems can improve patient care through the integration of a rules-based set of care plans that the clinical team can use to establish and sustain a complete set of protocols for diseases, medical problem sets and medical procedures.

For example, ProMedica implemented a CIS system called the 3M Master Member Index, loading some 750,000 patient records into the system which will allow ProMedica to manage multiple methods of identifying patients at multiple locations, accept and display clinical results from a variety of existing systems, and provide clinicians with decision support through system-generated clinical alerts.[10] The system not only includes the standard demographic data and insurance/billing information, it also allows streamlined access to detailed patient data including physician notes and data from current and previous physician encounters, laboratory and pathology results, and pharmacy records. A strategic advantage of the system is the clinical alerting software which uses expert system technology to analyze and correlate patient data entering the clinical data repository, and generates "alerts" as indicated or specified in advance by the users. In a similar fully-integrated CIS, Graduate Health Systems developed a system which includes not only admissions, discharges and transfers within the hospital, but also nearly 75 percent of the final patient record, including physician orders for ancillary services (laboratory tests, radiology procedures, etc.) and all results from patient tests and procedures.[11]

Computerized medical records systems typically have five levels of implementation.[12] The majority of providers are at the first level, while a few hundred providers are at the level of creating computerized medical records with document imaging. The five levels of implementation are:

Level 1: Automated medical records, which still depend on paper-based medical records, even though as much as 50% of patient information is computer-generated and stored in the form of computer printouts within the medical record.

Level 2: Computerized medical record systems in which traditionally generated medical records are indexed and scanned into a system using document imaging.

Level 3: Electronic medical records, which is an upgrade from level 2, and requires a common format and accessing techniques throughout the enterprise.

Level 4: Electronic patient record systems which focus on the patient and contain information from one or more provider enterprises.

Level 5: The electronic health record, a more comprehensive system which includes a network of provider and non-provider settings based on the patient as being the center.

There are a number of software companies that provide information systems designed to assist physicians, nurses and other clinicians in making decisions about patient diagnosis and treatment.[13] These systems range in price from several hundred to several thousand dollars, and similarly incorporate a wide range of features including diagnostic decision and support systems, and a range of input and output devices.

Clinical information systems are a good example of electronic document management (EDM) in health care, since they incorporate information from many different types of sources, including number, text, sound, digitized images, object-oriented images, computer-aided drawings, voice, video, animation, holographic images, even magnetic photographs that can be digitized immediately and shown on a television or sent over a phone line.[14] Since CIS systems are used heavily in treatment decisions, they must be designed to be run by personnel familiar with the needs and constraints of the medical professional using them. The information systems department will need to provide the infrastructure sufficient to operate these systems, including 1) network links with enough capacity to carry images, 2) workstations capable of displaying high-resolution graphics, 3) storage devices that can handle the huge image and voice files, and 4) standards for each of the various forms of data.[14,15] Once implemented, CIS systems can offer high payoffs by increasing operating efficiency, improving organizational effectiveness, and as a competitive weapon to link various medical providers within a larger system and more efficiently utilizing the expertise of specialists.

The CIS design team should include expertise from systems and records management, as well as medical professionals to provide operational expertise. Even if the CIS software shell is acquired rather than developed, healthcare companies may incur a significant

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cost for converting and indexing the paper records so that there is a good retrieval system to make their use efficient and effective. Because of the confidentiality of medical records, system security is an issue, and because of the importance of correct medical decisions based on the system, data integrity is critical. Also, since a patient's medical records may be needed for years in the future, an important element in developing a CIS is specifying the electronic records management policy and system guidelines for accessing, saving and destroying various kinds of documents in the system.

Case Management Systems

Case-management systems are designed to identify and assist in the management and treatment of potentially high-cost, resource intensive cases. Generally, case-management tools are integrated with utilization and/or authorization management system protocols.[17] Chronic and acute case management profiles are offered and specific treatment plans or practices guidelines may be integrated into the case-management software. One trend in case management is the shift in focus to process care support through referral and case management, rather than precertification and length of stay assignment or authorization of specific inpatient care episodes.

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As with CIS, several software companies offer Case-management systems, but these systems tend to be more expensive, ranging from a few thousand to tens of thousands of dollars. Features include outcomes management, quality and appropriateness of care, comparisons of actual practice patterns to critical path, and evaluation of patient-level detail against internal and external standards.[18,19]

Applications of information technology in health care administrative functions

Health information networks

Health information networks describe the array of healthcare information networks which generally follow four major strategies.[20]

Tactically focused health information network initiatives - are created to support one or several focused business initiatives, such as improving in-house lab volume or linking competing hospitals to share data for transferred patients. For example, a hospital interested in increasing the utilization of its in-house clinical lab will install network links to community physicians and offer a user interface that supports the entry of lab orders and retrieval of results.

Administratively focused networks - are designed to support administrative and financial processes, such as the routing of patient registration, eligibility, benefit, claims and encounter transactions. These systems provide administrative simplification and operational efficiencies and focus on reducing staff telephone and turnaround time for high-volume administrative patient/member processes.

Clinically focused networks (networked CIS) - are developed to support the movement of clinical transactions.

Universal networks - are conceived to support a wide range of enterprise transactions and communication methods, as well as the routing of administrative, financial and clinical transactions. They are designed to support both clinical and management enterprise wide objectives.

Community Health Information Networks (CHIN) and Regional Health Information Networks (RHIN), are an integrated collection of computer and telecommunications capabilities that facilitates communication of patient, clinical and financial information among multiple providers, payers, employers, pharmacies and related healthcare entities within a targeted geographic area.[21] Forces driving the formation of CHINs include President Clinton's healthcare initiatives, and also market pressures for cost reduction, federal regulations, vendor initiatives and outcome measurements. CHINs can be either non-profit entities operated by institutions, foundations or geographic consortiums, or for-profit entities with a vendor-owned and operated data base. The benefits of CHINs accrue to patients, providers and employers in the form of reduced paperwork, improved quality of care, and ability to compare provider cost and performance. Examples of CHINs include Ameritech Health Connections, Inc., Henry Ford Health Alliance Plan, and PRAXIS.

Issues critical to the effective implementation of CHINs include electronic data interchange standards which can be applied to electronic transactions for claims, claims attachments, enrollment and disenrollment, eligibility, healthcare payment and remittance advice, premium payments, first report of injury, and claims status.[22] Another problem that must be addressed before CHINs will achieve their full potential is the development of efficient and effective Master Patient Indexes (MPIs). These systems allow the accurate identification of the patient and cross reference of patient identifiers for each location in the enterprise.[23] MPIs are essential to data security and integrity.

Special Applications of Information Technology to Health Care

Artificial intelligence - Artificial intelligence provides the opportunity to capture and combine the professional judgment and expertise of experts for the use of less qualified personnel. For example, Med-Al Inc., Orlando won the 1994 Healthcare Innovations in Technology Award for the company's product to detect myocardial infarction (MI) in patients. The MI Predictor used artificial intelligence to recognize the variables and combination of variables that determine if a patient is having a heart attack. The MI predictor is 97% accurate, according to Med-Al sources.[24]

Decision support systems and Management support systems- Experts estimate that the U.S. healthcare decision-support market is valued at more than $100 million and is growing faster than the market for all healthcare software.[25] Decision support systems (DSS) could be extremely useful in the integrated delivery network or enterprise model. DSS can integrate information from databases that capture and store clinical and administrative data, and model relationships among variables. Furthermore, a well-designed DSS can enable professionals to communicate more efficiently.

Simulation applications - Applications of computer simulation to health care include modeling the outcome of several alternative pathways of treatment to find the most efficient and effective way of processing patients. For example, Central Baptist Hospital in Lexington, KY used simulation software to find options that decreased the average length of stay for patients in the hospital's emergency department.[26] The simulation helped identify patient-flow barriers in the emergency department, reduce overall patient turn-around time, and reduce patient wait times before entering a room, by allowing the hospital to compare the effects of various options in processing patients without actually going to the expense of implementing the different types of systems. The hospital added a three-room "Fast track facility" staffed with a nurse and a physician extender, which decreased the average length of stay in the emergency department by 5% to 25%, depending on the acuity of the patient's problem.

Mobile computing - Mobile computing refers to the use of portable input-output devices to make it possible and convenient for medical professionals, and especially doctors, to access and input information included in computerized patient record systems. While the technology is progressing in this area, development has been rather slow for a number of reasons.[27] The demands on mobile computers for medicine are particularly stringent, since it is essential that the technology not impede the work flow (for efficiency sake) or the quality of care provided (for efficacy sake). The physical environment in medicine may involve rugged conditions including spilled liquids and biohazards, requiring a sealed computer. The system must also be ergonomically designed to provide the somewhat conflicting requirements of screen readability, minimized weight, maximum battery life and think-speed response time. Furthermore, to be most effective, the mobile computer must be

networked with other parts of the system, and must be able to maintain data integrity through backup procedures in case of battery failure or some other event. One final barrier to the implementation of mobile computing is the unfamiliarity of physicians with computers, as well as their reluctance to use traditional keyboard devices, which are often viewed as the domain of clerical personnel. Meeting these many requirements will be a challenge in developing mobile computing in medicine, however, with the development of sophisticated CIS and CHIN systems, the advantages of mobile computing will almost certainly support the development of better mobile medical computing devices.

Telemedicine - One of the most exciting developments in medicine today is telemedicine. Effective telemedicine techniques are now available because of a number of new technologies, most importantly document imaging. Coupled with electronic document management systems, such as CIS or CHIN applications, information can now be transmitted over time and space to allow consultations from experts in remote locations.[28, 29] Telemedicine can not only assist in telepathology for improved use of specialists in diagnosis, it can also be used in videoconferencing, allowing effective consultation among professionals in remote locations. Such applications demand a fast network, so a consortia of providers sharing the cost of high-speed lines may be the most effective way to implement such systems. Telemedicine holds much promise for meeting the health care needs of under-served populations in sparsely populated regions and developing countries, as well as maritime medicine and military operations.

WorldWideWeb - Health care providers and professionals have also discovered that using the power of the WorldWideWeb is another way to access information from, and communicate with, other medical specialists, as well as to market health care services. Consumers can take advantage of the system in multiple ways to manage health and health care costs. All of the major on-line services - America Online, CompuServe and Prodigy - offer medical references, support groups and access to the Internet with links to health information worldwide.[30]

Conclusion

The health care industry is undergoing tremendous change. Consolidation within the industry brings the need for better coordination within larger organizational structures. Computerized medical technology is evolving rapidly, and cost constraints from government and private sector sources require increased information for control and billing purposes. Therefore, it is mandatory for hospitals and clinics to maintain their competitiveness through the use of modern technology principles, and integrate information technology and systems as critical parts of the hospital management or operations. In a 1994 HIMSS-Hewlett-Packard survey of 1,033 respondents, 43% indicated that the most important skill required for a healthcare chief information officer is business-strategy development.[31] Clearly the strategic implications of information technology will be a driving force in health care management in the decades to come.

Additional evidence of the importance of information technology in healthcare is the dazzling performance of healthcare information systems companies in the stock market, drawing a flood of investor interest, and attracting capital to the tasks of developing and producing innovative information technology for the industry. The healthcare information sector was once dominated by hospital-oriented financial and accounting software, but is now expanding to include the clinical and networking systems previously described.[32] From calendar year 1994 to 1995, the healthcare information systems index was up 178%, compared with a 35% gain in the NASDAQ Composite Index during the same period. Obviously the market perceives the opportunity for growth in the healthcare information systems industry to be promising, as the health care industry struggles to integrate the centuries old traditions of the art of medicine with new scientific and technological tools. Information technology offers the promise to help achieve the goal of providing high quality health care to those who need it at a reasonable cost.

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Temporal Trends in Maternal Characteristics and Pregnancy Outcomes: Their Relevance to the Provision of Health Services. Hawaii, 1979-1994

Gigliola Baruffi MD,* Loretta J. Fuddy MSW,** Alvin T. Onaka PhD,***
Greg R. Alexander ScD,**** Joanne M. Mor MS*****

This paper examines changes in maternal sociodemographic characteristics and pregnancy outcomes in Hawaii during the period 1979-1994. The more striking changes were increases of 129% in the proportion of births to women > 35 years old and of 67% in the proportion of births to unmarried mothers. The percentage of low birth weight and small-for-gestational age infants decreased while the proportion of premature births increased. Identified changes were not limited to selected population groups, but were found in various degrees in all ethnic groups. These findings are relevant to all health practitioners and will assist in the provision of appropriate care and counseling to individual women.

Introduction

One of the major functions of Maternal and Child Health (MCH) is the monitoring of maternal and infant health status and its determinants to guide policy development and to ensure that public health programs and health care services are appropriately targeting and meeting the needs of at-risk groups.[1] This effort is guided by the comparison of local health assessment information to established health status objectives for the nation[2] and the state.[3] An appreciable proportion of health objectives specific to the MCH population can be assessed annually through the use of state vital records data. This readily available source of information also allows for the examination of long-term trends in maternal risk characteristics and pregnancy outcomes.

* Associate Professor and Head,
Maternal and Child Health Specialization,
UH School of Public Health,
1960 East-West Road, C-105M,
Honolulu, Hawaii 96822
** Family Health Services Division,
Hawaii Department of Health
*** Office of Health Status Monitoring,
Hawaii Department of Health
****University of Alabama at Birmingham,
School of Public Health
***** UH School of Public Health

This work was supported in part by the MCH Training Grant, Maternal and Child Health Bureau, Health Resources and Services Administration, PHS, DHHS.

With the end of the millenium rapidly approaching, this is a logical time for state MCH leaders and health services providers to reassess their current approaches to prevent or ameliorate adverse pregnancy outcomes and their associated precursors. Vital records data on maternal risk factors and pregnancy outcomes can support these assessments and be used to engage health services providers and policy makers in discussions of strategic policy initiatives to improve pregnancy outcomes in the next century.

The purpose of this study is to examine trends in maternal sociodemographic risk characteristics and pregnancy outcome indicators to determine if marked population-wide temporal changes have occured in the state of Hawaii, and whether any change has appeared in the relationship between risk characteristics and birth outcome indicators.

Methods

Hawaii birth certificates for the period 1979-1994 were used in this study. Single live births to resident women (N=283,272) were included and analyzed by major maternal ethnic groups. Ethnicity was self-reported.

Selected sociodemographic characteristics were: maternal age; parity; education; marital status; nativity status; and military status of parents.

Maternal age was separately combined with maternal education and parity to create age-adjusted risk indicators of educational attainment and parity. Maternal educational attainment was defined as high (13 or more years of completed education), average (12 years of completed education), and low (less than 12 years of completed education) for adults, 18 years of age and older. As most adolescents (less than 18 years of age) would be classified by this scheme as having low educational attainment solely by virtue of their age, a separate coding strategy was used to define educational attainment for this group. Adolescents with two or more years above their grade level for age were classified as having high educational attainment while those with two or more years below expected grade level for age were defined as having low educational attainment. This coding scheme facilitates the examination of the impact of low educational attainment without the influence of young maternal age.[4]

Parity was determined by the number of previous live births reported on the birth certificate. High parity-for-age was defined as one or more previous births for adolescents, 3 or more previous births for women 18-21 years of age, 4 or more previous births for

Table 1.—Maternal Characteristics, 1993-94, and Percentage Change since 1979-80, Hawaii Resident Live Births

Maternal Ethnicity	Maternal Characteristics											
	Age				Educ. Attainment				Parity			
	< 18 yrs.		≥ 35 yrs		Low		High		Primiparity		High-par-age	
	%	(%change)	%	(%change)	%	(%change)	%	(%change)	%	(%change)	%	(%change)
Caucasian N 10,030	1.1	(-47.6)*	14.6	(+180.8)*	5.2	(-41.6)*	52.4	(+17.5)	47.2	(-0.6)	1.2	(-14.3)
Hawaiian/PH N 9,092	8.1	(+15.7)*	6.8	(+78.9)*	13.4	(-21.6)*	24.7	(+16.0)	37.5	(-1.0)	3.8	(-32.1)*
Filipino N 7,170	3.7	(+15.6)*	12.0	(+60.0)*	10.0	(-50.5)*	45.6	(+18.7)*	43.5	(+11.5)*	1.5	(-42.3)*
Japanese N 4,532	1.1	(-21.4)	25.1	(+221.9)*	1.6	(-42.8)	69.7	(+3.6)	47.9	(0)	0.6	(+20.0)
Other Asian/PI N 2,868	1.3	(+8.3)	20.2	(+134.8)*	10.6	(-40.8)*	48.6	(-1.4)	49.0	(+7.4)*	0.9	(-35.7)
Samoan N 1,049	4.6	(+48.3)*	7.3	(+43.1)*	13.0	(-44.7)*	22.4	(+7.7)	34.3	(+12.1)	7.5	(-27.2)*
Black N 1,189	2.4	(20.0)	5.9	(+195.0)*	4.1	(-53.4)*	49.3	(+50.3)*	45.4	(+6.6)	1.3	(-27.8)
Total[1] N 37,299	3.6	(+9.1)*	13.3	(+129.3)*	8.7	(-34.6)*	44.5	(+10.0)	43.6	(+1.6)	2.1	(-22.2)*

1. Includes all ethnic groups shown and all other ethnic groups which had too few births.
* Indicates statistical significance at P < 0.05.

women 22-24 years of age, and 5 or more previous births for those 25 years or older. All other multiparous women were categorized as having appropriate parity-for-age.

Selected pregnancy outcomes were: birth weight; gestational age; and birth weight-for-gestational age. Birth weight was categorized as low (< 2,500 g.), very low (< 1,500 g.), and high (≥ 4,250 g.). Gestational age was categorized as preterm (< 37 weeks), very preterm (< 33 weeks), and postterm (≥ 42 weeks). The criteria for defining small-for-gestational age (SGA) and large-for-gestational age (LGA) were based on the 1991 U.S. fetal growth reference curve.[5]

Linear multiple regression analysis was used to test the statistical significance of temporal trends in sociodemographic characteristics and pregnancy outcomes within each maternal ethnic group and in the total population. This statistical method was also used to identify the predictors of mean birth weight at the beginning and at the end of the study period. Logistic regression analysis was used to calculate the odds ratios measuring the independent effects of maternal sociodemographic characteristics on low birth weight, prematurity, and small-for-gestational age at the beginning and at the end of the study period.

Results

Tables 1 and 2 present maternal sociodemographic characteristics in 1993-94 and the percentage change since 1979-80 by ethnic group. At the state level, there was a marked increase of births to women ≥ 35 years old (129%) and to unmarried women (67%), and a small increase of births to foreign-born women (16%) and to teenaged (< 18 yrs) mothers (9%). The proportion of births to mothers with low educational attainment and with high parity-for-age decreased (-35% and -22%, respectively) while births to highly educated women increased, although not statistically significantly.

Marked differences were found between ethnic groups. In 1993-94, Hawaiians had the highest percentage of births to teenagers (8%), single women (52%), and mothers with low educational attainment (13%). Compared to Hawaiians, Samoan mothers had a similar percentage of births to women with low educational attainment. Samoans also had the highest proportion of high parity-for-age births (7.5%) and nearly a 50% increase in births to teen mothers. Japanese mothers had the highest percentage of older childbearing (25%), and high educational attainment (70%). Childbearing to Japanese women ≥ 35 years old increased more than 200 percent during the study period. Other Asian/Pacific Islanders had

Table 2.—Additional Maternal Characteristics, 1993-94, and Percentage Change since 1979-80 by Ethnic Group, Hawaii Single Live Births

Maternal Ethnicity	Maternal Characteristics					
	Unmarried		Foreign-born[2]		Active Milit. Duty	
	%	(%change)	%	(%change)	%	(%change)
Caucasian N 10,030	15.1	(+28.1)*	8.9	(+30.9)*	43.1	(+4.3)*
Hawaiian/PH N 9,092	51.8	(+53.2)*	1.4	(+75.0)*	2.6	(-43.5)*
Filipino N 7,170	27.3	(+88.3)*	61.5	(+4.1)*	8.7	(-46.3)*
Japanese N 4,532	15.1	(+118.8)*	16.7	(+19.3)*	4.1	(+13.9)*
Other Asian/PI N 2,868	14.4	(+118.2)*	72.3	(+14.2)*	7.1	(-44.1)*
Samoan N 1,049	38.7	(+52.4)*	65.2	(-27.4)*	7.3	(-56.3)*
Black N 1,189	19.3	(+69.3)*	7.8	(+2.6)	81.3	(+0.7)
Total[1] N 37,299	28.0	(+66.7)*	26.5	(+16.2)*	18.3	(-13.7)*

1. Includes all ethnic groups shown and all other ethnic groups which had too few births.
2. Includes U.S. Territories.
* Indicates statistical significance at P < 0.05.

Table 3.—Birth weight, 1993-94, and Percentage Change since 1979-80 by Ethnic Group, Hawaii Single Live Births

Maternal Ethnicity	Mean BW g ± s.d.	(%change)	LBW < 2,500g %	(%change)	VLBW < 1,500g %	(%change)	HBW ≥ 4,250g %	(%change)	SGA [2] %	(%change)
Caucasian N 10,030	3,435 ± 550.2	(+1.3)*	4.2	(-17.6)*	0.6	(-14.3)	5.6	(+12.0)*	7.9	(-27.5)*
Hawaiian/PH N 9,092	3,315 ± 547.2	(+1.3)*	5.6	(-17.6)*	0.7	(-22.2)	3.9	(+14.4)	11.0	(-16.0)*
Filipino N 7,170	3,178 ± 525.1	(+1.5)*	7.8	(-8.2)	0.7	(-12.5)	2.1	(+75.0)*	15.4	(-17.6)*
Japanese N 4,532	3,212 ± 499.4	(+1.0)	6.4	(-7.2)	0.6	(-14.3)	1.6	(+23.1)	13.7	(-16.5)*
Other Asian/PI N 2,868	3,266 ± 481.4	(+0.3)	4.8	(-11.1)	0.3	(-62.5)	1.8	(-14.3)	11.0	(-14.7)*
Samoan N 1,049	3,496 ± 594.0	(-2.1)*	3.8	(+52.0)*	1.1	(+266.7)	9.0	(-1.1)	5.5	(+103.7)*
Black N 1,189	3,187 ± 634.2	(-0.7)	9.8	(+3.1)	2.4	(+60.0)*	2.5	(+257.1)	12.6	(-14.3)*
Total[1] N 37,299	3,308 ± 549.1	(+0.8)*	5.8	(-9.4)*	0.7	(-12.5)	3.8	(+15.1)*	11.1	(-18.4)*

1. Includes all ethnic groups shown and all other ethnic groups which had too few births.
2. Percentages based on cases not missing gestational age data.
* Indicates statistical significance at P < 0.05.

Table 4.—Gestational Age, 1993-94, and Percentage Change since 1979-80 by Ethnic Group, Hawaii Single Live Births.

Maternal Ethnicity	Mean GA wks ± sd	(%change)	PreT (< 37 wks) %	(%change)	VPreT (< 33 wks) %	(%change)	PostT (≥ 42 wks) %	(%change)	Missing GA info %	(%change)
Caucasian N 10,030	39.3 ± 2.04	(-1.5)*	7.1	(+22.4)*	0.7	(-30.0)*	8.4	(-54.3)*	7.2	(+140.0)*
Hawaiian/PH N 9,092	39.1 ± 2.36	(-0.5)*	9.9	(0)	1.5	(-21.0)*	10.3	(-33.5)*	11.9	(+271.9)*
Filipino N 7,170	38.8 ± 2.26	(-0.5)*	10.3	(-1.0)	1.5	(-25.0)	8.0	(-23.1)*	11.1	(+382.6)*
Japanese N 4,532	39.0 ± 2.00	(-1.0)*	7.6	(-1.3)	0.9	(-35.7)*	6.8	(-49.2)*	11.6	(+452.4)*
Other Asian/PI N 2,868	39.1 ± 2.07	(-0.8)*	7.5	(-3.8)	0.7	(-50.0)*	8.2	(-41.4)*	14.1	(+314.7)*
Samoan N 1,049	39.0 ± 2.52	(-0.2)	12.5	(-0.8)	2.1	(+40.0)*	11.9	(0)	20.3	(+190.0)*
Black N 1,189	38.6 ± 2.70	(-1.5)*	13.8	(+40.8)*	3.1	(+55.0)*	6.8	(-54.0)*	7.7	(+165.5)*
Total[1] N 37,299	39.1 ± 2.21	(-1.0)*	8.9	(+7.2)*	1.2	(-20.0)*	8.6	(-43.0)*	10.8	(+260.0)*

1. Includes all ethnic groups shown and all other ethnic groups which had too few births.
2. Indicates statistical significance at P < 0.05.
Note: percentages do not include missing values.

the highest proportion of first births and of foreign-born mothers. Black mothers, followed by Caucasians, were most likely to indicate an active duty military father.

Tables 3 and 4 show birth outcomes in 1993-94 and percentage changes since 1979-80 by maternal ethnicity. At the state level, mean birth weight increased by 28 grams. There was a 9.4 percent reduction in the proportion of low birth weight (< 2,500 g) and a 15 percent increase in the proportion of high birth weight (≥ 4,250 g) infants. The percentage of infants born at less than 37 weeks gestation increased by 7%, while the proportion of very preterm (< 33 wk) and postterm (≥ 42 wk) births decreased by 20 and 43 percent respectively. The proportion of SGA infants also decreased. A large increase was found in the proportion of birth certificates missing information on gestational age.

In 1993-94, the major ethnic differences were found among Samoan and Black mothers. While Blacks had the highest proportion of low and very low birth weight and preterm and very preterm deliveries, Samoans had the highest increase in the proportion of low and very low birth weight and the second highest increase in the proportion of very preterm births. Filipinos had the highest proportion of small-for-gestational age births (15.4%), and Samoans had the highest proportion of infants weighing 4,250 grams or more (9.0%).

Linear and logistic regression analyses were performed to identify

the independent effects of sociodemographic characteristics on selected pregnancy outcomes, holding constant maternal ethnicity. To detect any change in such associations over time, these analyses were repeated by four year periods from 1979-82 to 1991-94.

Table 5 presents the regression analyses of factors associated with mean birth weight, low birth weight, and SGA in the most recent period. All the variables included in the model were significantly associated with mean birth weight. The largest negative changes in mean birth weight were associated with primiparity and incomplete birth certificates.

With few exceptions, the same characteristics were associated with higher risk of giving birth to a low birth weight or a SGA infant. Maternal age of 35 years or older, low educational attainment, primiparity, and being single were significantly associated with higher risk of bearing a low birth weight or SGA infant. Military status was associated with low birth weight but not with SGA. Maternal foreign nativity status was found to be protective for low birth weight but not for SGA. Maternal high educational attainment was a protective factor for both outcomes.

With few exceptions, the factors associated with pregnancy outcomes at the beginning of the study period were the same (data not presented here). The most relevant differences were found for a father active in the military and a foreign-born mother: in 1979-82 these factors were not associated with low birth weight and were protective against the birth of a SGA infant.

Table 5.—Regression Analysis of Factors Associated with Pregnancy Outcomes, Hawaii Resident Live Births, 1991-94.

Maternal Characteristics	Mean BW (g)		LBW (< 2,500 g)		SGA	
	Parameter	S.E. estimate	Odds ratio (95% C.I.)	P value	Odds ratio (95% C.I.)	P value
Intercept	3,491.0	6.18				
Age < 18 yrs	-51.3*	12.70	1.17 (0.99, 1.38)	.06	0.98 (0.85, 1.12)	.75
Age ≥ 35yrs	-27.9*	6.27	1.50 (1.37, 1.65)	< .01	1.16 (1.08, 1.26)	< .01
Low educ attain.	-47.5*	7.90	1.15 (1.03, 1.30)	.02	1.20 (1.10, 1.31)	< .01
High educ. attain	32.2*	4.51	0.84 (0.78, 0.91)	< .01	0.87 (0.82, 0.92)	< .01
Primiparity	-104.2*	4.31	1.45 (1.36, 1.56)	< .01	1.59 (1.51, 1.68)	< .01
High parity-for-age	-47.9*	14.82	1.12 (0.90, 1.40)	.31	1.03 (0.85, 1.25)	.77
Unmarried	-51.1*	5.57	1.18 (1.08, 1.28)	< .01	1.16 (1.09, 1.24)	< .01
Foreign-born	12.0*	5.90	0.90 (0.82, 0.99)	0.3	0.95 (0.88, 1.02)	.13
Active milt. duty	24.3*	6.14	1.18 (1.06, 1.30)	< .01	0.92 (0.85, 1.00)	.05

Reference groups: Age 18 - 34; average educational attainment; average parity-for-age; married; U.S.-born; civilian.

* Indicates statistical significance at P < 0.05.

Discussion

This analysis revealed several noteworthy trends. While there was a decline in high parity-for-age births, there was also a marked increase of births to older women in every ethnic group, especially Japanese mothers. These data are consistent with national trends in women delaying pregnancy.[6] Notwithstanding the evident ethnic differences in other sociodemographic characteristics, the rise in births to unmarried women was observed for every group and was particularly notable among adult women as the percentage of adolescent mothers is very low. These findings have important implications not only for the targeting of public health support services but also for the awareness of private providers to the changed characteristics of their clientele.[7]

In spite of the increases in births to older and to unmarried women during the past 15 years, the overall mean birth weight has risen and low birth weight and small-for-gestational age percentages have decreased. Reductions in births to mothers with low educational attainment and increases to those with high educational attainment are probably contributing to these declines. The overall proportion of teenaged mothers is low in comparison with national rates[6] and has increased minimally over the study period. Hawaiians, Samoans, and Filipinos are the ethnic groups that have relatively high percentages of adolescent mothers and should be specifically targeted by teen pregnancy prevention efforts. However, older maternal age not adolescent age was found to be significantly associated with low birth weight and small-for-gestational age in this study.

While low birth weight declined in the state and in all other ethnic groups, it increased significantly among Samoans and was accompanied by a non significant but worrisome increase in the proportion of low birth weight and preterm infants. Black mothers also experienced an increase in very low birth weight, very preterm, and preterm births. This is a matter of concern, particularly in light of their over-representation in the military population in Hawaii, where financial barriers to access of health care services are presumably not an issue.[8] Further investigation is needed to ascertain the reasons for this disturbing trend among Samoan and Black women.

Mean gestational age declined coinciding with the reduction of postterm and an increase in preterm births. The decline in mean gestational age may have been influenced by changes in obstetrical practices during this period or may reflect changes in the completeness, accuracy and method of reporting gestational age estimates on birth certificates.

Notwithstanding the decline in the proportion of low birth weight infants, the Hawaii rate is still above the U.S. and Hawaii Year 2000 objective of 5%.[2-3] This finding may suggest the need for a reappraisal of current approaches to address this important public health problem. The multiethnic population of Hawaii, which encompasses diverse groups with disparate anthropometry, socio-economic and nativity status, nutritional practices and cultural traditions, presents a unique challenge to the development of programs and policies aimed at improving pregnancy outcomes.[9-15] The association of maternal age ≥ 35 years, single marital status, and primiparity, as well as low educational attainment, with low birth weight indicates that focused MCH programs, albeit culturally appropriate, are not sufficient to combat poor pregnancy outcomes as the various risk factors are distributed in the whole population. All providers of health care need to contribute to the effort by focusing on the changed characteristics of their clientele that may

increase the risk of low birth weight in groups otherwise considered in good health. The findings of this study are relevant to health services providers across the socio-economic span. They pinpoint characteristics of population groups that may require special attention to individual women in every ethnic group.

State level MCH needs assessments are aimed at fostering a closer collaboration and complementarity between public agencies in charge of developing programmatic and policy directions and the health services providers who have the responsibility to implement such activities at the individual client level. The examination of vital record data offers the possibility of establishing such essential collaboration on the basis of population-wide information for mothers and infants. The usefulness of information derived from vital records depends on the completeness and accuracy of the information reported. The proportion of records missing gestational age data increased during the study period from 3% to 11%. Concerted efforts should be made to improve the quality of birth certificates and to explain their relevance to the quality of care provided in the state otherwise Hawaii will fail to realize the maximum benefit from this irreplaceable source of readily available data.

Inspite of its great usefulness, information on maternal sociodemographic characteristics, birth weight and gestational age is limited in its ability to adequately guide the direction of programs, policies, and service delivery to improve pregnancy outcomes. Infant mortality data could enhance these investigations;[16] but infant death is sufficiently rare that its annual assessment by ethnic group is hindered by unstable small numbers. Other sources of data, including surveys and focus groups, are needed to compile a more complete picture of the population to understand factors that influence pregnancy outcomes.

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Council Highlights

Friday, May 2, 1997
Roger Kimura MD, Secretary

The meeting was called to order by Dr Spangler, President at 5:32 p.m.

Those present were Drs L. Howard, President-elect; C. Kelley, Treasurer; R. Kimura; AMA Delegates: C. Kam, A. Kunimoto; AlternateAMA Delegates: F. Holschuh, S. Wallach; County Presidents: J. Betwee - Maui, A. Bairos - W. Hawaii; Councilors: D. Canete, C. Goto, M. Shirasu, K. Thorburn, W. Young, P. Kim, C. Kadooka, B. LeeLoy, M. Yolles; Past Presidents: A. Don, G. Goto, J. McDonnell, R. Stodd.

HMA Staff: J. Won, B. Kendro, N. Jones, J. Asato, P. Kawamoto, A. Rogness - recording secretary

Minutes: The minutes of the March 7 meeting were approved as circulated.

- Dr Spangler reported that the HMA is still working on the rabies issue and a meeting between the Department of Agriculture, HMA, Department. of Health and the Veterinary Society is being scheduled; 2) that four Hiroshima physicians will visit this month and HMA will host a special dinner meeting; 3) Dr Gordon Liu donated a painting to the HMA which is displayed in the small conference room; 4) Lisa Tong, HMA's Legal Counsel has resigned and will be working for the State Office of Consumer Protection.
- Dr Howard reported from the Finance committee; 1) He is working on the financial policy manual and will require a fiscal note for all resolutions; 2) HMA is currently looking at updating its current main computer. 3) The committee approved an educational grant request of $300 for the Resident Physicians; b) giving a $50 cash incentive for any physician who brings in a full dues paying member; c) rejoined the HI Employers Council.
- The Alliance reported that the HCMS Alliance President and Mrs. Connie Chun attended the AMA Alliance leadership meeting in Chicago. In March the Alliance was very active with Doctor's Day events, such as signing of proclamations with the Governor and the Mayor and the Doctor's Day Black and White Ball. The proceeds from the ball will be presented to the U.H. School of Medicine on May 17. On April 9 the Alliance supported a U.H. School of Medicine class of 1999 golf tournament and raised $5,000. On April 26 the HCMS Alliance helped the Hilo Cancer Society. Three HMA Alliance delegates will be going to the AMA Annual Meeting in Chicago in June.

For Action

- Council approved the Finance Committee's recommendation to pay Egami & Ichikawa the amount of $1,272.44 for their services to the Reorganization Task Force.
- Council approved the Finance Committee's recommendation of sending a staff person or physician to the AMA Membership Symposium with a budget of $1,000.
- Council approved the Finance Committee's recommendation of appointing Dr Charles Kelley as the new Treasurer.
- Established policy that travel expenses of the neighbor island Councilors/Delegates must be submitted within 6 months.
- Accepted the nomination of Dr Rueben Guerrero from the American Cancer Society to be on the HMA Cancer Commission for a three year term.
- Agreed that HMA actively pursue a class action suit on behalf of HMA's members for unpaid PGMA claims.
- It was passed by Council that the 1998 annual meeting be held at the Hilton Hawaiian Village.
- It was passed by Council that the funds be sent to the North Dakota Physician Relief Fund.

Component Society Reports

Honolulu.—Dr C. Goto reported that last month's HCMS membership meeting was well attended. Mr Devenot of the HI Employers Council attended the meeting. The topics were Practice Management and Labor Law Requirements for Small Business Employers. It was a good meeting and beneficial to physicians since most physicians run small businesses. Dr Goto supports the HMA rejoining the HI Employer's Council.

Maui, Kauai, West Hawaii.—No reports

Hawaii.—Dr Kadooka reported that Senator Richard Matsuura passed away the morning of May 2/97.

For Information

Dr Thorburn's move to the mainland.—Dr Thorburn reported that she is resigning from Council and will be moving to Spokane, WA. She expressed her appreciation in serving on Council. Dr Thorburn has done a tremendous amount of work with the prisons, the university and the HMA and is an outstanding citizen. A round of applause was given.

MD Participation in Clinical Trials.—HMA will work with the Senior Physicians Committee to recruit physicians and spouses between the ages of 55-74 for screening of prostate, lung, colorectal and ovarian cancer.

Legislature.—A summary of the actions at the legislature was handed out at the meeting. A legislation update will be sent to HMA members.

Annual Meeting.—Plans are set for the meeting at the Hilton Waikaloa starting October 30 - Nov. 2. A special evening is being planned for Friday, October 31 Halloween night. A list of the scientific sessions was distributed. The Presidential Inauguration for Dr Leonard Howard will be held the Saturday evening.

Physicians Accessing Internet Project.—This project was held on 4/19/97, was an excellent seminar which was well attended.

Seminar on Prescription Drugs Use and Abuse.— A conference on use and abuse of prescription drugs is scheduled for Friday, September 19 at the Hilton Hawaiian Village. Staff will also look into separate seminars on each of the neighbor islands.

Meeting was adjourned at 8:10 p.m.

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• Use Times Roman font in 10 point size.

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• Graphs, tables and figures must be sized by the author to 3-1/ 2 inches wide, which is the column size. Please make graphs separate from text.

A cover should contain the name of the author with whom HMJ will correspond, include an address, phone number, fax number and pager if needed, along with a statement that the manuscript has been seen and approved by all authors.

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Please keep the title short, specific and *catchy* if possible. If the title submitted is too long, it will be edited. List first name, middle initial and last name of each author with highest academic degrees; name of department and institution to which the work should be attributed; name and address of author to whom requests for reprints will be addressed, or statement that reprints are not available; the source of support in the form of grants, equipment, drugs, or all of these.

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The second page of the manuscript should include an abstract no longer than 60 words that highlights for the reader the essence of the authors' work. It should focus on facts rather than descriptions and should emphasize the importance of the findings and briefly list the approach used for gathering data and the conclusions drawn.

Style

Use *JAMA* style or consult the AMA *Manual of Style*. Use the objective case, such as "the team determined" or "the study involved," not I or we, and avoid medical jargon. Use generic drug names unless citing a brand name relevant to your findings. Do not use abbreviations in the title and limit their use in the text.

Text

HMJ recommends that articles be divided into sections with headings:

Introduction.—The purpose of the article and rationale for the study. Do not review the subject extensively.

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Acknowledgments

Acknowledge only persons who have made substantial contributions to the study. Authors are responsible for obtaining written permission from everyone acknowledged by name; readers might believe those acknowledged are endorsing the study and conclusions.

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Symposium on Type II Diabetes

Sponsored by Joslin Diabetes Center & hosted by Straub Joslin Center for Diabetes on March 22, 1997 at Kahala Mandarin Hotel.

Etiology of Type II Diabetes: The Rationale for Treatment Strategies

F. Xavier Pi-Sunyer MD, Prof. of Medicine, Columbia College

General Discussion Type II

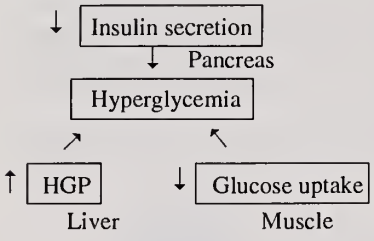
Scope of Problem: Dxed 6.5%; Undxed 6.5%; increased incidence with age.

Type I = 20% Type II = 80%

Type I: a/c ketosis, ketoacidosis; insulin dependent; autoimmune

Type II: ketosis resistent; a/c hyperinsulinemia; abdominal obesity; metabolic abnormalities precede onset; autosomal dominant; a/c HTN; accelerated atherosclerosis.

Pathogensis Type II



Pathogenesis NIDDM

- Early: ↓ pulsatile insulin secretion
- Late: hypoinsulinemia
- Insulin Resistance:
 - ↑ Glucose production (by liver)
 - ↓ Glucose uptake (by muscle)
- ↑ Hepatic Glucose production in Type II
- ↓ Glucose uptake by muscle in Type II
- ↓ Glucose uptake: ie.

↓ splanchnic; ↓ adipose; ↓ muscle; ↓ brain.

Syndrome X

- Insulin resistance
- Hyperinsulinemia
- Central obesity
- HTN
- Glucose Intolerance
- High VLDL, & triglycerides
- Low HDL
- Hyperuricemia
- Increased microvascular disease

*DCCT

(10-year study of 1441 pts with IDDM)

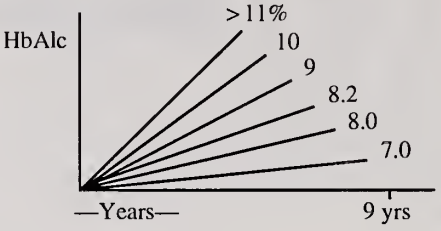
Conventional vs Intensive Rx:

Proved that HbAlc 7.0 critical point: By keeping HbAlc at 7.0 or lower, retinopathy is reduced 76%; nephropathy 39%; neuropathy 60%.

* Japanese (Kumamoto) Studies show that similar conclusions can be reached with NIDDM.

Normal Goals

FBS	< 115	< 120	< 180	> 140
	< 140	< 180	< 180	
	< 120	100-149	100-160	
HbAlc	< 6%	< 7%	>8%	

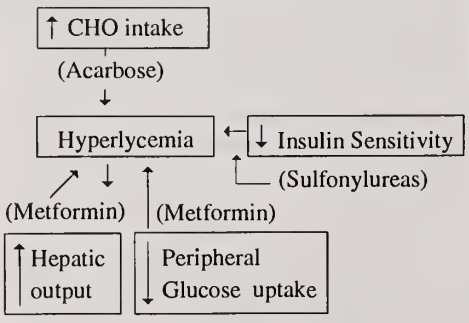


Treatment Goals: FPG < 140
PP < 120

Therapeutic Modalities

- Nutrition:
 Normal BS; normal lipid levels; reasonable weight; prevent complications.
 CHO: more fiber; Fat: 30%, TC < 300; Protein: 11-20; Na: < 3gm; Alcohol: ≤ 2mg
- Exercise:
 Improves glucose control; maintains wtg loss; lowers cardiovascular risk factors; gives psychologic well being; do a pre-exercise evaluation (Stress ETT if indicated esp over age 35); exercise 20-45" 3 times a week.
- Response to Oral Therapy:
 -Maximum effect with diet, exercise, and weight loss
- Effective
- Best response first 6-10 years

Sites of Action



Sulfonylureas

- 1st generation (eg. chloropropamide 100 - 500mg 1 x d)
- 2nd generation (usually 1 - 2 x d) eg Amaryl
- 50% of newly dxed DM respond
- 15 - 20% have little or no effect

Metformin

- Use alone or in combination
- Results in wtg loss; lowers lipids
- No hypoglycemia
- Side effects: GI sy's
- Dose: 500mg bid to maximum 2500mg/d
- Lipid Effect: Reduces T.C. 5%; LDL 8%; triglyceride 16%; raises HDL 2%

Acarbose

- Lowers postprandial hyperglycemia
- No insulin effect
- Competes with starch
- Reduces enzyme antibody: glycoamylase; sucrase; realtase
 (Hence lower glucose level, higher fermentation and more flatulance)
- Dose: 25mg tid; 50mg tid; 100mg tid
- Side effects: bloating, flatulance, loose stools

Type II Diabetes: Individualizing Therapy

Richard S. Beaser MD; Assist Clinical prof., Harvard Medical School

Recognizing Oral Therapy Inadequacies

Treatment options for OralMonotherapy Inadequacy:

- Combination Therapy
 - Sulfonyl + Biguanides
 - *a* glucoside inhibitor & sulfonylurea
 - Sulfonylurea + glycoside
 - Biguanide + Insulin etc, etc
- Goals:
 - Traditional goal: normal B.S.
 - Post DCCT Goals: normal HbAlc levels

Insulin Therapy for Type II

- Pts insulin insensitive
- Need longer insulin doses
- May be insulin sensitive
- Use 2 or more injections of rapid acting and intermediate insulin
- Teach self monitoring

LISPRO Insulin (New)

- 15 minutes after injection; peaks 30-90 minutes; 3-5 hr duration, therefore, needs basal insulin eg NPH, Lente

Insulin Progress: Conventional vs interrupted; conventional vs intensive

Combination Insulin + Oral Agents:

- Bedtime insulin + oral agents

- Oral therapy added to standard insulin regimen

Kumamoto Intensive Therapy of NIDDM:
Retinopathy reduced 65%; nephropathey 40% (Rezulin)

TROGLITAZONE + Insulin:
- Troglitazone: reduces insulin requirement; reduces hepatic glucose output
 - improves diabetic control with 200 to 400mg
 - 15% stopped insulin
 - 70% reduced insulin dose
 - Dose: Continue insulin dose+ 200mg; if no change in 2 - 4 weeks, increase to 400mg

Minimizing Impact of Diabetic Complications
Ramachandiran Coopan MD, Assistant Clinical Prof. of Medicine, Harvard Medical School

Microvascular Complications:
Nephropathy
Retinopathy
Neuropathy
Peripheral microvascular dis.

Macrovascular Complications (CAD):
3 - 4 times increased risk with NIDDM
Multivessel disease
Manifest as MI/CHF

At time of Dx NIDDM:
Retinopathy: 14 - 24%
CAD: 20%
Microalbuminurea: 10 - 15%

Sydrome X (A risk factor with NIDDM):
Abdominal obesity
Dyslipidemia
HTN
Insulin Resistance
High LDL & Apo B
Low HDL
Impaired glucose tolerance
Hyperuricemia
Hyperproinsulinemia
High plasma insulin

Probable mechanism for atherogenesis in NIDDM:
Dyslipidemia; Hormones eg growth factor

Macrovascular Disease:
- Suspect CAD; address risk factors: high lipids, HTN, smoking, DM/obesity
- Guidelines for lipid lowering in Diabetics:
 - Without CAD: Keep LDL at 130 or lower
 - With CAD: Lower LDL to 100

Microvascular Disease:
- Retinopathy: 1995 7.5^3 to 10^3 blindness; proliferative retinopathy with vitreous bleeding (Laser Rx prevents retinopathy)1 Frequency of exams: IDDM: within 5 yrs; NIDDM: with dx.
- Nephropathy:
 - Diabetes is 1° cause of ESRD; NIDDM = 60%; IDDM = 40%
 - Stages of nephropathy: Pre-detection: 40% NIDDM: early hypertrophy& sublimal histopathology, incipient nephropathy, azotemia, uremia
 - Significance of micro albuminuria: Albumin/creatinine
 Normal: < 20mg
 Micro: 20 - 300mg
 Macro: > 300mg

Therapy of NIDDM Renal Disease:
- ACE
- Calcium channel blockers
 ACE = 1% in 5 years. Placebo = 13% in 5 years

Neuropathy:
eg carpal-tunnel syndrome may be a/c diabetic neuropathy
- Sensory-motor neuropathy
- Symmetrical bilateral neuropathy of feet
- Mononeuropathy
- Visual neuropathy

*Prevent foot problems by educating patients how to care for their feet
- Take socks off and check the pulses
- Evaluate senstation
- Promp treatment and early referral for any pathology.
- Instruct patients to never soak their feet

Life in These Parts

Elected, Appointed & Honored

Neurologist **James Pierce** was named the Queen's Medical Center Outstanding Physician for 1997. Jim is Queen's chief of staff, and certified in both psychiatry and neurology. This is the fourth time he has been so honored by Queen's.

Richard Mamiya, Hawaii's internationally recognized heart surgeon was honored at a March 27 dinner at Sheraton Waikiki by the Japanese Cultural Center.

The Aloha Medical Mission headed by **Ramon Sy** was recently conferred a Presidential Award by Philippine President Fidel V. Ramos for their humanitarian efforts here and abroad. This year three teams totaling 62 volunteers left on February 12 and returned on February 28 from Laos, Bangladesh, Vietnam and the Philippines.

I Remember You

Among the 2,500 attending the "I Remember You" testimonial for retired state senator Dick Matsuura on Sunday, March 7 in Hilo was a HMA delegation (of Carl Lehman, Fred Holschuh, John Spangler, Jon Won and Alan Kunimoto etal). During the testimonial, John presented a koa plaque with the following inscription which said it all.

"Mahalo Senator Richard Matsuura"

At times like this,
we physicians should be poets,
so as to better express our appreciation to you
for all that you have done for us
and the people of Hawaii.

Throughout your years as Senator
and advocate for the medical community,
you have painted visions for us,
encouraging us to stretch our way of thinking
always mindful of the other guy's point of view.

We thank you for always
listening to our concerns,
for being brave and bold and
never fearing to speak out
for what is right and just.
You introduced our bills, counseled us regarding
political wisdom, and rescued us
when we were falling.
We will remember fondly all that you have done,
from your plan for turning lava fields
into vineyards
to preventing doctors from being the
"deep pocket" by the unscrupulous.

As physicians put on earth to bring comfort and
healing to our patients, we are ever mindful
that there are many miracles and events in life
beyond our control.
We find some solace in knowing that
wherever you are,
you will carry out your mission with the same
zest and zeal for which we will be
forever grateful."

Mahalo nui loa, The Physicians and Staff of the Hawaii Medical Association.
Senator Matsuura passed away on May 2, 1997

The DUI Loophole

A state law requires emergency personnel to follow HMA and AMA ethical standards in protecting doctor-patient confidentiality. Thus ER physicians cannot report blood alcohol levels of obviously drunk patients treated. ER physicians Fred Holschuh (Hilo Medical Center), Andy Schwartz (QMC) and Craig Thomas (Wahiawa General) supported by Mothers Against Drunk Driving (and now endorsed by the Hawaii Medical Association) have been working to change that state law. Fred says, "Isn't it comical: A guy gets a dog bite on the butt and we have to tell the cops, yet if a driver is in a car crash and obviously intoxicated, we can't go to a cop and say, "This patient is drunk." Andy adds, "If they make it to an ER after a drunken-driving accident, their chances of getting arrested for DUI are almost nil." (Ed. The good news is that the legislature has passed the necessary amendments.)

Honolulu neurologist **G. Webster Ross** feels a national effort is needed to help people recognize early signs of dementia. Webster says 40% of people have treatable dementia that are not treated because symptoms were not recognized. Research on 191 Japanese-American men with dementia in the Honolulu Heart Program indicated that 60% of the cases were undetected. The results were published in *JAMA's* special edition

Continued on Page 161

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News and Notes

Continued from Page 159

on Alzheimer's disease. Co-authors were Drs Helen Petrovitch, Kamal Masaki, J. David Curb, Len White etal.

Len White calculates the cost of dementia in Hawaii at about $400 million annually. "Web's paper is the first ever to really measure the magnitude of how big the iceberg is."

Webster feels that 1.8 million people in the U.S. over age 65 have potentially "unrecognized dementia." He says early recognition and treatment can reverse dementia from subdural hematomas, drug intoxication, Vit B12 deficiency, hypothyroidism, and CNS infections. He feels that cognitive/memory/screening or a 20-minute mental status exam should be part of every physical exam of people over 65. Alzheimer's accounts for 60 to 80 percent of all dementia cases worldwide. About 30 to 40 percent are vascular dementia from one or more strokes. About 8 to 10 percent are related to Parkinsonism and 5 percent to Vit B12 deficiency, hypothyroidism, subdural hematomas and CNS infections.

Mark Grattan, Straub cardiac surgeon is pioneering "minimally invasive coronary bypass surgery." Ideal candidates for the technique are those needing single or double bypass surgery, have no other health problems and are low risk. About 10% of the 1,400 patients who annually undergo open-heart bypass surgery in Hawaii would qualify. Mark uses a small incision under the left breast, the heart is slowed, but remains beating, thus avoiding cardiopulmonary bypass.

The technique was introduced last year at the Cleveland Clinic, John S. Hopkins and Stanford University. Typical recovery time is 2-3 days of hospitalization and 1-2 weeks of limited activity.

Miscellany

An American came running up to the customs desk in Rome. Gasping for breath, she moved to the head of the line and said, "I have to make the noon plane in New York. Can you please rush me through?"

A man in the middle of the line came up to her.

"Everybody's in a hurry," he said. "But don't worry, your plane won't leave before you get there."

She gave him an irritated look and snapped, "How the hell do you know that?"

"I'm the pilot," he said.

Officer Garcia spotted a double-parked car outside an office building, and she walked over to it and began writing out a summons. A man came running out of the building, shouting, "wait officer, wait!"

"Is this your car?" she asked.

"Yes it is," the man said. "but please don't write out that ticket. I have an explanation."

Continuing to write, Garcia said, "An explanation for double parking? Let's hear it."

"I was at the dentist having a tooth pulled," the man said. "I double parked so I'd have something to worry about to keep my mind off the pain."

Potpourri

When the concerned wife called about her ailing husband for the third time, the doctor lost his patience. "There isn't a damn thing wrong with your husband," he said. "I checked him out thoroughly. He only thinks he's sick."

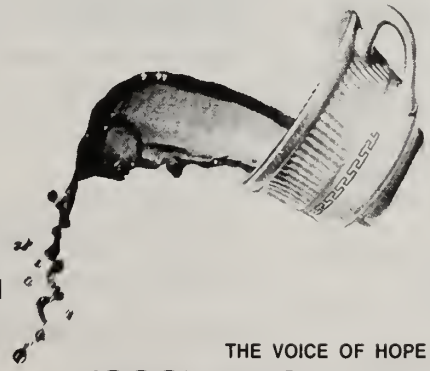
A week later the physician ran into the woman on the street. "So how's your husband?" he asked.

"Terrible. Now he thinks he's dead."

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Nonmembers.—Please call 536-7702 for a nonmember form. Rates are $1.50 a word with a minimum of 20 words or $30. Not commissionable. Payment must accompany written order.

For Sale

Misc for sale.—Canon copier model 4050 $2,950; desk 60" x 30" $50.; Credenza 71" x 18" $100. Ask for Nelson 536-7702.

4 in-line X-ray Viewer.—Like new. $385. Call 537-1155

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Misc.

Playwright seeks.—Anecdotal items (letters, diaries, stories, reminiscenses, books, etc.) for a stage play related to sail-past and salute of Molokai Leprosy Colony, 16 July 1908 - as well as re-enactment of this event on 29 May 1925. Personal items from patients, sailors, clergy, civil servants, medical, descendants, particularly valuable even second or third remove. Howard I. Laniado, P.O. Box 1728, Cathedral Station, NY, NY 10025. Phone and Fax: (212) 662-9895.

House Rental needed.—Geriatrics Fellow beginning 8/1/97 searching for a rental for 2+ years. Victor at (303) 322-7940 until 6/30 then c/o Geriatric Medicine, Univ. of Hawaii.

The Weathervane

Russell T. Stodd MD

Everybody wants to get into the act.

In Massachusetts 70 state optometrists have filed a class action suit against Harvard Pilgrim Health Care to obtain a contract. It seems that the HMO, the largest in New England, requires patients to be examined by ophthalmologists or designated optometrists. A state senator is planning to file an "any qualified provider" bill, and the state attorney general is proceeding with an investigation of Harvard Pilgrim for possible anti-trust violations. These "any willing provider" laws just keep resurfacing. Could it be that many people are repelled by some HMOs' restrictions to medical practice?

Virtue is its own punishment. It is dangerous to be sincere unless you are also stupid.

Dr Paul Fischer, a pediatrician teaching at the Medical College of Georgia, was alarmed when he saw his two-year-old son "smoking " a straw. The doctor said the little boy said he "wanted to drive a fast car and smoke cigarettes" when he grew up. Dr Fischer decided to test his own son and daughter, and devised a simple research program using a card game with ad symbols (e.g. golden arches, Mickey Mouse, Apple Comp. etc). He dispatched a team to local day-care centers to measure a couple hundred other children, and published his data in *JAMA* in December 1991. The doctor found that six-year-olds recognized the Joe Camel as often as Mickey Mouse and more often than Pepsi's logo. When his research was cited in a lawsuit against R.J. Reynolds, the incredible power of the tobacco industry came to bear upon the doctor and his research. After multiple hearings, years of testifying and lack of support from the Medical College of Georgia, Dr Fischer resigned from MCG where he had spent his entire career, and now has a quiet private practice. He is bitter against the tobacco industry. "They keep you from working on your research and harass you so you never do any again."

FDA to *Merck* - "The disclaimer does not balance the misrepresentation".

How do you influence doctors that your product shows durability and reliability? Well, if you are *Merck*, and pushing Prinivil for hypertension, you hire Cal Ripken, Jr. As every baseball fan knows, Mr Ripken holds the major league baseball record for most consecutive games played. The ad running in the *New England Journal of Medicine* shows a picture of the Oriole infielder, with the words, "Cal Ripken Jr. and *Prinivil*...Both on the job everyday." But wait, iron man Ripken is not hypertensive, and does not endorse *Prinivil*, so *Merck* placed a small print disclaimer to that effect. That won't fly, said the Food and Drug Administration. *Merck* was ordered to discontinue the ad and similar materials immediately.

Advertising is the art of making whole lies out of half truths.

Another bonus of refractive surgery is the need for advertising guidelines. Some rules orchestrated by the Federal Trade Commission are as follows:

1. "Throw away your glasses!" This statement is a no-no; no one can guarantee such a long term result.
2. "The Food and Drug Administration has determined that the excimer laser we use is safe and effective for PRK laser surgery." Not acceptable, because the rules forbid references to the FDA approval status of any medical device in advertisements.
3. If you cite statistic, be prepared to back up the claim. Explicit results will need a study of patient records to substantiate the claim.
4. Testimonials are unethical according to AMA guidelines if they atttribute special or unique techniques to a physician.
5. Also banned is advertising which is deceptive or misleading (hey, what else is advertising for?).

Come on, Dr Hall, get over yourself.

Didn't we just go through this a few months ago? In the field of absurd patents, Gary W. Hall, MD has received a patent on a method of making corneal incisions of a "particular depth" and in a "particular direction" when resistance of the cornea against the leading edge of the blade exceeds a "particular level."—? Oh, really? And will there be a particular person to examine particular records to determine which particular surgeons will pay particular royalties?

No poet ever interpreted nature as freely as a lawyer interprets truth.

In our inimitable American world where we are all captives of the legal system, Pillar Point Partners has filed a lawsuit against Barnet Dulaney Eye Center of Phoenix alleging infringement of certain excimer lawyer patents under its control. PPP wants $250 per-procedure from Barnet Dulaney which operates a custom excimer laser. Imagine the attorneys' joy! They are only in the discovery phase, but already racking up considerable expenses. Physicians Resource Group Inc. has recently announced that it would support the center's defense of the lawsuit, and they are soliciting contributions from us rank and file types. PRG is a practice management company affiliated with Barnet Dulaney. It's a key to the money bin for the attorneys as they collect the required depositions, hearings, engineering studies, research documents, technical data, etc., etc. The struggle will be prolonged, because that is what the winners want. The winners, of course, are the attorneys; the losers are everybody else.

Nothing exceeds the vanity of our existence more than the folly of our pursuits.

In Wisconsin, two researchers reported in the *Journal of Clinical Psychiatry* on a disorder called rhinotillexomania. For most of us, the condition is called nose-picking. Among their proboscis probing promos they found that 65% used the index finger, 20% used the little finger, and 16.4% used the thumb. Two-thirds were relieving discomfort, 2.1% did it for enjoyment, and an amazing 0.4% said they were probing for sexual stimulation.

How awful to reflect that what people say of us is true.

A young man had just been appointed to the Air Force Academy, but threatened to kill himself after breaking up with his girlfriend. He was taken to the hospital and admitted to the psychiatric unit. When his psychiatrist learned that he had been accepted to the academy, she felt it was necessary to inform the academy of what had happened. She did not inform the patient. The academy revoked the patient's admission after receiving the news. The patient won a breach of confidentiality suit against the doctor, but the appeals court vacated the judgment. The court noted that the patient was obligated under the terms of his admission to the academy to "disclose any new illness or injury since completing the final qualifying medical exam." Therefore, the physician could not be held liable for the young man's loss.

Addenda—

- Persistent central serous retinopathy (CSR) after four months may be improved with laser photocoagulation..
- Being politically correct means always having to say you're sorry.
- What does a cow have four of, and a woman just two?—Feet.

Aloha, and keep the faith—rts ■

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Leo M. Maher, MD

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Describe pathophysiology of migraine.
Evaluate appropriate agents
(abortive vs. prophylactic)
for migraine headaches.

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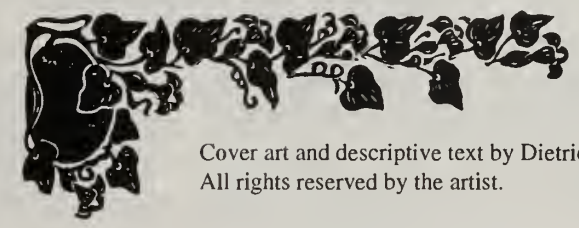
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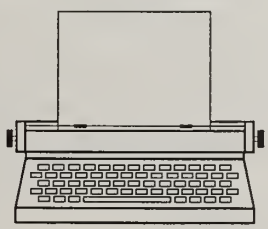
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Hawaiian Runners

Makoa was the most famous of all Hawaiian runners. But another was actually so fleet he could run short distances on top of water and once chased down a notorious canoe thief.



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Editorial

Patient Groups Call on Congress to Fully Fund the Food and Drug Administration

Norman Goldstein MD, F.A.C.P.
Clinical Professor, Medicine (Dermatology)
John A. Burns School of Medicine
University of Hawaii

Twenty leading, national patient organizations have called on key members of the House Senate Appropriations Committee to provide, at a minimum, level funding for the Food and Drug Administration for Fiscal Year 1998.

"The Food and Drug Administration helps patients gain access to important new lifesaving therapies. It is critical that the Agency receive adequate funding so it may sustain and build upon recent achievements," said Don Riggin, President and CEO of the Arthritis Foundation and Chairman of the Board of Directors, National Health Council.

"Equally important, level funding to the Agency is necessary to reauthorize the Prescription Drug User Fee Act for five more years," continued Mr. Riggin. One of the fundamental principles of the Prescription Drug User Fee Act is that the fees are additive and do not supplant the annual Congressional appropriation. Failure to provide at least level funding will automatically trigger an end to user fee payments, which will limit patient access to new therapies in a timely manner.

The Washington based National Health Council does not support the creation of new user fees, on industries not covered by current law, to make up for a reduction in funding to the Agency as called for in the President's budget request. Therefore, it is critical that Congress provide at least level funding to the Food and Drug Administration so it can continue to carry out its many critical public health responsibilities.

The National Health Council is a private, nonprofit umbrella organization of more than 100 health-related organizations nationwide. Its core membership includes over 40 of the nation's leading patient organizations, such as the Arthritis Foundation, American Cancer Society, Juvenile Diabetes Foundation International and the Alzheimer's Association, Inc.—all groups representing people with chronic diseases and disabilities. Other Council members include the American Medical Association, Biotechnology Industry Organization and private businesses such as Pfizer, Amgen and Cigna.

Thanks to Stephanie Marshall of the National Health Council for this info/editorial.



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Commentary

Robert A. Nordyke MD

By George Chaplin
Editor at Large, The Honolulu Advertiser



Robert A. Nordyke MD of Straub Clinic and Hospital

Voltaire said, "Men who are occupied in the restoration of health to other men, by the joint exertion of skill and humanity, are above all the great of the earth. They even partake of divinity, since to preserve and renew is almost as noble as to create."

Many of Hawaii's physicians merit such an encomium, but none more than Dr. Robert Nordyke, now seriously ill.

He is well recognized as a pioneer in nuclear medicine, but how many know his background, his formative years that made him into the multi-faceted person that he is?

He arrived 78 years ago in a California farming town, Woodland, in the Sacramento Valley, a town so small the kids could walk to either the elementary or the high school. They had one of each.

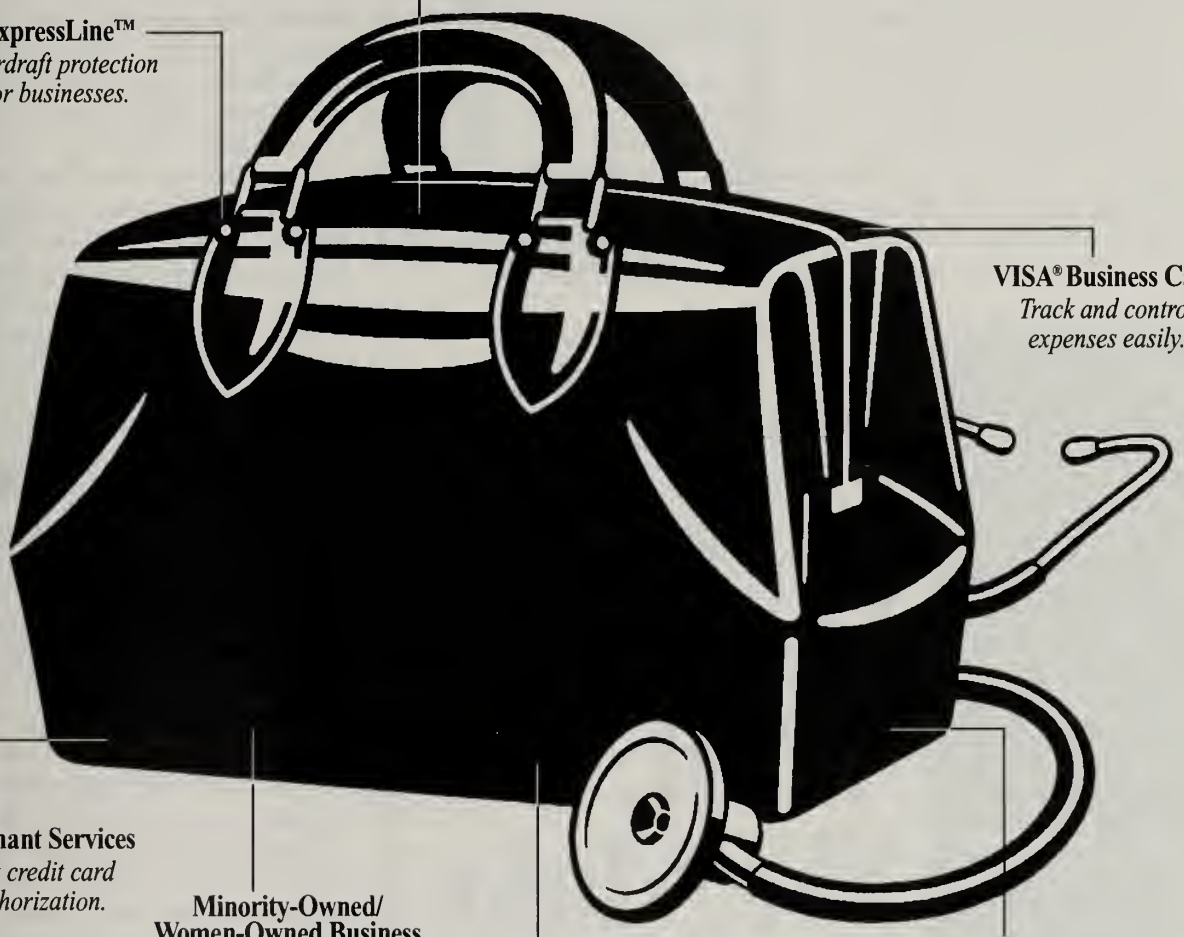
It was a time of screened porches and rocking chairs, a time of basic American values. His was a family with little money, but with seven children and lots of love - as well as a tree house that could be reached by climbing out of a second story window and jumping from the roof.

In due course Bob had a broken arm, poison oak and scarlet fever, with a big quarantine sign on the front door and half the family living elsewhere.

A lad with standard gustatory priorities, he used to sneak chocolate powder from a large can high on a kitchen shelf. Ever since, he sneezes every time he eats chocolate-either an allergy or an ongoing sense of guilt.

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EQUAL HOUSING LENDER

Once, when his parents were away for a day, he was sent to stay with his maternal grandmother. He decided to run away - who among us hasn't? - with pajamas, toothbrush and favorite spinning top in a paper sack. It began to get dark, he was hungry and when a passing policeman told him his mother and dad were looking for him, his resolve melted and he let himself be taken home. Shades of Horatio Alger, Tom Swift and the Rover Boys!

A good, healthy, active American boy, he had his share of problems - from a BB gun that had a habit of shattering windows or targeting a well-padded lady's rump, to a ride on a horse he boldly mounted when he was five years old. The horse stopped on the tracks of the Sacramento Northern Railway and, despite Bob's frantic pleas, refused to budge. Fortunately, the oncoming electric train screeched to a halt just feet away. Meanwhile, his mother was trying to find who had stolen her husband's favorite horse.

While Bob was still young, his dad taught him how to drive the family car. But instead of low gear he put it into reverse and promptly took out a nearby fence.

One summer during the Depression, he picked apricots on a ranch just out of town. He worked 10 hours a day, at 10 cents an hour, with 10 cents deducted for a sandwich and flavored water. Lunch! Incidentally, 10 cents is what it took in those days for a Saturday matinee featuring Tom Mix or Hoot Gibson.

As the Depression wore on, his mother, a Mills College alumna, had to take a job teaching. But it was in a nearly abandoned goldmine town in the Sierra foothills. There were only five children living there and since nine youngsters were required to qualify for an elementary school, Bob and three of his six brothers and sisters had to move there into a broken-down, unpainted shambles of a house, complete with well and outhouse. But winter snow and some old skis they found made up for the hardships.

Let's move to 1939, when at 19 Bob finished his junior year at Berkeley. His four-hour-a-day job in the university library didn't really enable him to save any money, so he got a summer job as a logger, felling timber in the Sierras. He and 17 others were signed up by a persuasive union representative. The next morning they were summarily fired. The National Labor Relations Board reinstated them, but a day later they were fired again - for "not working hard enough." No one since ever accused Bob of that!

A co-worker and friend of Bob's suggested they go to his family's farm in Idaho and pitch hay. Sounded good, but no money for travel, and a thousand miles to go. So, they hopped freight cars, sometimes clambering on top and stretching out, sometimes climbing into empty cars, scrounging food when they could, and most importantly, dodging unfriendly hoboes and railroad police, the notorious "bulls" eager to use their heavy clubs.

They finally got there and made the hay fly. But, always eager for new experiences, Bob during part of that summer worked as a Forest Service firefighter battling wild fires, which are always treacherous, often quick to reverse direction.

He survived, hitchhiked home and was graduated from Berkeley in 1940, having majored in English literature, political science and public speaking.

He signed up with his draft board, and followed with a two-month course in San Francisco in radio repair and radio telegraphy. He then thumbed his way to San Diego and got a job as radio operator on a large tuna fishing boat manned by Portuguese, only three of whom spoke any English.

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Off they sailed to the waters of Costa Rica and the Galapagos Islands. He sent Morse Code, up to 30 words a minute!

Came the war and Captain Robert Allan Nordyke put in four years in radar countermeasures. Next, med school at the University of California, San Francisco on the GI Bill. But there was no money to pay for the mortgage on a house he and brother Jim, a Navy lieutenant fresh from service, bought for their mother and themselves in Berkeley.

So he and Jim bought a 1928 - repeat, 1928 - Chevy with a flat bed for $75 and went into the trash-hauling business in between classes. They did well and soon graduated to a one-and-a-half-ton surplus army truck bought at an auction.

Five years later, when interning at the Kaiser Permanente Hospital in Oakland, Bob Nordyke delivered, under supervision, 80 babies in a single month. Near the end of that rotation, at one delivery, he took off his mask and looked up at the new mother from between her draped legs and told her that all was well and that she had a beautiful baby.

She looked him straight in the eye and then, puzzled and upset, she said, "Aren't you my trash man?"

A few words about Bob's wife, Ellie, who lived in Hawaii as a child and went to Punahou. Came Pearl Harbor and she was evacuated to San Jose, where she finished high school. Her family and Bob's went to the same church and Bob's mother and brother decided that Bob was just right for her.

Once Bob was out of med school and Ellie completed a five-year nursing course at Stanford, they walked down the aisle on June 18, 1950, which adds up to 47 years ago.

Once Bob finished his grueling internship, Ellie quietly asked, "Why don't we take a year off and travel?" Great idea, but no money.

So ... he began working three eight-hour shifts - a regular daytime one at Kaiser's drop-in clinic, a 4 p.m. to midnight shift at Kaiser Hospital, and then on-call for emergencies from midnight to 8 a.m. Ellie worked two shifts, one as a public health nurse in San Francisco, and as a nurse in Kaiser's pediatric section. Six weeks later they had $2,000 and were off - by plane to New York, third class on the Queen Mary across the Atlantic, a cheap Left Bank hotel in Paris, where they bought a car from two Stanford boys at summer's end, and headed for Belgium.

Their budget: $2 a day, carefully nurtured, sleeping in a makeshift car bed on river banks, in hay fields, and splurging now and then in a



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campground in Holland, Germany, Denmark, Sweden, Norway, south to France and Spain. The cupboard was almost bare, when they heard about possible jobs at a U.S. air base near Casablanca, and ferried across the Straits of Gibraltar, to Morocco. Bob got a just-opened medic's job at the base and Ellie, with no nurse vacancies, found work in the accounting department, with the snowcovered Atlas Mountains as a backdrop.

In three months they had enough money to continue traveling. A French ship out of Marseilles took them across the Mediterranean, through the Suez, down the Red Sea, past French Somaliland in Africa to Ceylon, then to Saigon, on to Singapore and Hong Kong. Next an American freighter to Japan and then L.A., where Bob began his residency in medicine. Hard to beat or even match folks like that.

Ellie, as many know, spent 23 years at the East-West Center, a power in the population field, with several books and innumerable professional articles to her credit. She's made her own contribution to the population explosion, since she and Bob have five children, of whom they can well be proud.

Their son, who lives next door to them just above Punahou, is a physician, in charge of the Queen's Clinic in Hawaii Kai. Their four daughters include a registered nurse in Colorado, a teacher-writer living in Tokyo, an engineer-lawyer working at Hawaiian Electric Company and a registered dietitian here in Honolulu. Add to that number 11 grandchildren and you've got a good-sized voting bloc.

Bob has had a distinguished career in nuclear medicine, an impressive list of academic and hospital appointments, leadership posts in local and national organizations, and a half-dozen excellence-in-research awards. On publications, I stopped counting at 90.

Bob Nordyke lives and loves medicine, but his interests go beyond. He is a talented writer, an avid reader of such authors as Melville and Conrad, such poets as Wordsworth, T.S. Eliot, and Robert Frost, such playwrights as Eugene O'Neill, to cite but a few. He is a precise man, but a warm and compassionate and caring one who has earned widespread respect, admiration, and affection.

Dr. Robert A. Nordyke Summarized Biography

Pioneer in nuclear medicine, computerized medicine, and what is now known as medical informatics; superb clinician, widely published medical researcher, medical educator, innovative administrator. Straub Clinic and Hospital, Pacific Health Research Institute and Straub Pacific Health Foundation. Professor of Medicine at John A. Burns School of Medicine, 1991-95; Governor of the American College of Physicians, Hawaii Chapter, 1981-85. Named as one of Hawaii's top doctors in ***The Best Doctors in America: Pacific Region, 1996-1997*** (Woodward/White Inc. of Aiken, S.C.) as reported in ***Honolulu*** magazine, June 1996, doctors chosen by other doctors.

Born: July 14, 1919 Woodland, California

Military Service: U.S. Air Force, Captain, Radar Countermeasures, 1942-46

Education:
B.A., U. of California, Berkeley, in English, Public Speaking, and Political Science, 1940 M.D., U. of California, San Francisco, 1951
Rotating Internship, Kaiser Permanente Hospital, Oakland, CA, 1951-52
Residency, Internal Medicine, Wadsworth V.A. Hospital, Los Angeles, CA, 1953-56

Married: Stanford University Chapel, Stanford, 6/18/1950
To Eleanor Cole:
Daughter of Louise and Ralph G. Cole (executive director of the Y.M.C.A. of the Territory of Hawaii, 1931-41)
Punahou School, 1933-45
B.S., Stanford University, 1950
M.P.H., U. of Hawaii, 1969
Research Fellow, East-West Center, 1969-92
Author of ***The Peopling of Hawaii***

Certification:
Diplomate, American Board of Medical Examiners, 1959
Diplomate, American Board of Internal Medicine, 1959 and recertified 1977
Diplomate, American Board of Nuclear Medicine, 1972
Medical Organization:
Member of the following medical organizations :
American College of Physicians, Governor of Hawaii Chapter, 1981-85
American Society of Internal Medicine President of Hawaii Chapter, 1980-81
Society of Nuclear Medicine, President of Hawaii Chapter, 1962-63
American College of Nuclear Medicine
American College of Nuclear Physicians, Delegate from Hawaii, 1971-84
Hawaii Medical Association
Continuing Medical Education Program Committee, 1965-68
Continuing Medical Education Committee, 1969-72 vice chairman, 1962
Bureau of Research & Planning, 1971-75
Joint Manpower Commission (physicians, nurses), 1972-75
Chair, Health Manpower/Health Costs Committee, 1976-78
Community Health Care Committee, 1978-79
Representative to State Board of Medical Examiners, 1978
Editor of special edition of ***The Journal of the HMA*** in honor of his colleague, Dr. Fred I. Gilbert
Honolulu County Medical Society
Delegate to HMA, 1969-74
Board of Governors, 1979-81
American Thyroid Association
Western Society of Clinical Research
American Federation of Clinical Research
Hawaii Academy of Science, Council, 1967
Pacific Health Research Institute
Board of Directors, 1960-91 and 1993-present
Associate Director and Secretary, 1965-91
President, 1985-91
Medical Director, 1991-95
Senior Investigator, 1995-present
Adviser to 24 summer scholars, 1960-present
Straub Pacific Health Foundation, Vice-President, 1991-93
American Board of Nuclear Medicine, Hawaii representative, 1977
National Academies of Practice, Distinguished Practitioner, Academy of Medicine, elected, 1993-present

Community Service:
University of Hawaii, Health and Social Welfare
Manpower Education Council, School of Medicine representative, 1972-74
Rutgers University Research Resource in Computers in Medicine
Hawaii Community Foundation Medical Advisory Committee
Pacific Radiopharmacy
Professional Board of Directors 1979-95
Magnetic Resonance Imaging Advisory Board
Honolulu YMCA
Chairman, Camp Branch, 1964-73, Camp Erdman: instrumental in bringing about building of new cabins, other structures
Central Union Church
Outrigger Canoe Club

Awards:
First annual Professional Activities Award, Straub Clinic and Hospital, 1984
Excellence in Research Award, Straub Pacific Health Foundation, 1989-91
Laureate Award, American College of Physicians, Hawaii Chapter, 1990
Annual Koa Bowl Award, American Society of Internal Medicine, Hawaii Chapter, 1991







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Excellence in Research Award, Straub Clinic and Hospital, 1991 and 1993
Excellence in Research, Arnold Award, Straub Clinic and Hospital, 1995
Special Recognition Award, Society of Nuclear Medicine, Hawaii Chapter, 1997

Publications: More than 100 professional publications

His Family includes:

Wife: Eleanor Cole Nordyke

Children: Mary Ellen Nordyke-Grace, Honolulu; Carolyn Cozzette, Highlands Ranch, Colorado; Dr. Thomas A. Nordyke, Honolulu; Gretchen (Nini) Worthington, Honolulu; Susan (Nunu) Nordyke, Tokyo

11 Grandchildren:
Aimee M. Grace, Nalani L. Grace, Cameron N. Grace, Trevor R. Grace, Noelle W. Grace, Andrew N. Cozzette, Jennifer M. Cozzette, Larissa H. Nordyke, Veronica A. Nordyke, Thomas J. Nordyke II, and Kaylin E. Worthington.

Three sisters:
Betty Scher, Claremont, CA
Helen Krug, Atascadero, CA
Mary Louise Hardison, Santa Paula, CA

Brother: James P. Nordyke, Honolulu

Description of Research Work Done by Dr. Robert A. Nordyke

Dr. Robert A. Nordyke is an internationally recognized specialist in nuclear medicine and a pioneer in the field of medical informatics, recognized for his development of computerbased medical records, databases, and clinical studies of thyroid disease. Since establishing the Department of Nuclear Medicine at Straub Clinic and Hospital in 1960, Dr. Nordyke has built a uniquely large and complete thyroid disease database, which has helped uncover many new facts about these frequently underdiagnosed diseases and about their treatments. He has demonstrated the correlation between size of a goiter (thyroid gland enlargement) and increased thyroid function (hyperthyroidism), has shown how the cure rate for hypothyroidism is affected by various drug combinations and dosages, and, most recently, determined what is the most cost effective sequence of thyroid function testing for general hospital laboratory use. Dr. Nordyke developed, in collaboration with Casimir A. Kulikowski, Ph.D., one of the earliest pattern recognition methods for computer decision support employing a combination of advanced statistical and logical reasoning techniques. Dr. Nordyke's research, in collaboration with Dr. Fred Gilbert, led the research efforts on information systems for multi-specialty clinics, chronic disease clinics, and screening for breast cancer at the Pacific Health Research Institute (PHRI).

(At a time when doctors kept patient records on 3x5 index cards and were viewing the computerization of medical records with suspicion, Dr. Nordyke recognized the power of computers as tools not just for keeping tidy notes, but for gathering and analyzing medical data in a way that would help direct doctors' diagnoses and treatments for patients. A visionary always bent on improving treatment for his patients, he was 30 years ahead of his time in realizing that the kinds of patients a doctor sees vary from practice to practice and that databases collected specifically for each practice improve the quality of patient care dramatically.)

Editor's Note:

Bob Nordyke MD is a very special man, as indicated by George Chaplin, himself a very special man.

Dr. Nordyke served as guest editor for the June 1995 Festschrift honoring Fred Gilbert MD - a testimonial to Fred and to his longtime associate and friend as well as to Bob. It was our largest and best Festshrift.

Bob has received many accolades, accomplishments and awards - as indicated in his biography. Most recently he received a special recognition award from the Society of Nuclear Medicine, Hawaii Chapter.

Mahalo Nui Loa, Bob for the Fred Gilbert Festshrift, for your efforts to construct cabins at the YMCA Camp Erdman on Oahu's North Shore, for your years of research and administrative guidance at the Pacific Health Research Institute, for the many many patients you have helped over the years, and for your friendship.

Medical School Hotline

Public Health in Medical Education

by Kenton J. Kramer, Ph.D., Assistant Professor, Department of Tropical Medicine and Medical Microbiology

Kay A. Bauman, M.D., Associate Professor, Department of Family Practice and Community Health

A 1993 survey commissioned by the Assistant Secretary of Health Philip R. Lee stated that the United States had significant shortages of public health professionals including physicians (Am. J. Prev. Med., 1996). The goal of the U.S. Public Health Service, therefore, was to increase the number of physicians interested in the public health aspects of medicine. However, almost universally, medical education focuses on individual patients. It may be many years before the student realizes that his/her patient's health is directly related to the patient's family and the community in which the patient lives. The community medicine component of the M.D. Program at the John A. Burns School of Medicine (JABSOM) aspires to instill in our first year medical students an understanding of the principles of public health and the utilization of those principles to promote and preserve health.

Public health education emphasizes ways to promote and preserve health as well as to anticipate and/or correct factors adversely affecting the well-being and functioning of the community. This expansive view of health requires many types of health care professionals acting together as the physician for the community. In Hawaii, there is the added aspect of ethnic diversity and cultural beliefs which may at times come into conflict with western medical practices. The Problem-Based Learning (PBL) curriculum adopted by JABSOM in 1989 emphasizes the role of the family and the community in health issues by promoting community medicine as an important concept in medical care. One of our goals is to produce students with community awareness and cultural sensitivity and whose philosophy includes the maintenance and improvement of health not only for their patients but for all members of the community in which they serve.

JABSOM's curriculum gives our students a wide range of community experiences in order to promote cultural awareness and to examine ways of putting public health concepts into practice. To accomplish this goal, JABSOM has a dual tract community medicine curriculum. Entering first year students are required to select either the Primary Care and Community Medicine Program (PCCM) or the Ke Ola O Hawaii (Health of Hawaii) Program to fulfill their community medicine requirement. The student's total commitment in either program is 15 months.

In PCCM, the students participate in two of the following organizations: Queen Emma Clinics, Hina Mauka Drug and Alcohol Treatment Center, HUGS (Help Understanding & Group Support) for seriously ill children, Diamond Head Mental Health Clinic, Halawa Correctional Facilities, Leahi Hospital's Adult Day Care

Facility, Health Care for the Homeless, and the Tuberculosis Branch of the Department of Health. The time commitment at each site is 4 hours per week for 3 months. Students develop an appreciation for the medical needs of the individuals seeking care at each of these facilities and to interact with patients from various cultural backgrounds. They also learn the physician's role in meeting those needs and begin to gain an appreciation for the role other health care professionals play in caring for the patient. Finally, each student undergoes hospice training at either Hospice Hawaii or St. Francis Hospice where the focus is on comfort and community care for the dying and support for their family.

Working with community organizations is just one aspect of the PCCM curriculum. In their weekly health care problems, students are asked to integrate their PCCM learning with simulated patients and to explore other community agencies which may help in treating their "patient's" health problem. PCCM continues during the summer between the student's first and second year. The students must shadow a primary care physician and complete a community medicine research project. Shadowing a physician for 9 weeks is an integral part of the education of physicians. Students apply what they have learned during the year on "real" patients and examine how their preceptors interact with the community and contribute to solving public health issues through community and political involvement. At the same time, students are asked to identify and research a community health problem. This research project is a chance for the student to apply public health concepts and to explore ways epidemiology and biostatistics are used to investigate a health problem and as tools for developing possible solutions. Through these projects, students gain important research skills by investigating a community health care problem and at the same time gain practical experience in designing and executing a project with public health implications. Students have examined such diverse areas as cigertera poisoning on Oahu, bicycle safety practices, impediments to childhood immunization programs, development of anti-smoking campaigns which target specific groups, health care issues at Halawa Prison and the effects of delivery room temperature on newborn distress.

The second tract of the Community Medicine curriculum involves a multi-disciplinary approach to community medicine. Under the auspices of Ke Ola O Hawaii, students from the Schools of Medicine, Social Work, Nursing and Public Health come together to address health care issues of their community. There are four Ke Ola sites located at Queen Emma Clinics, Kalihi Palama Health Center, Kokua Kalihi Valley Comprehensive Family Services, and Waianae Coast Comprehensive Health Center. These sites bring students from the four disciplines together with grass-roots community organizations to identify and develop health projects, such as increasing participation in childhood immunization programs, improving access to medical care by native Hawaiians, and school– based educational programs on health. The students meet once a week for 4 hours to learn the skills needed to work in a multicultural/ multilingual community. Other practical areas addressed are factors which influence group dynamics, ways to facilitate the functioning of small groups of individuals from different backgrounds, community needs assessment, and program planning and implementation. Active community involvement is a hallmark of the Ke Ola Program. Students leave the program with the background and skills needed to tackle the health care needs in the under served areas of our State.

The partnership between JABSOM and the community organizations involved in PCCM and Ke Ola is providing valuable learning opportunities for our students to study and practice the principles of public health. This unique arrangement expands the learning environment away from the physical structures of the Manoa Campus and allows our students to quickly integrate into the community. The JABSOM administration is grateful to the participating organizations for volunteering their staff and facilities to help train the future physicians of Hawaii. With their help, JABSOM will continue to promote primary care specialties as career choices for our students. Studies are in progress to evaluate the effect these efforts are having on the career choices of our medical graduates.

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Diphyllobothriasis after Eating Raw Salmon

Jeffrey W. Hutchinson, MD[1]; James W. Bass, MD[1]; Denise M. Demers, MD[1]; Gerald B. Myers, MD[2]
Departments of Pediatrics[1] and Pathology[2] , Tripler Army Medical Center, Honolulu HI

An 11-year-old boy in Hawaii passed mucus and a moving object in his stool. The object was identified as a segment of the fish tapeworm Diphyllobothrium species which is not indigenous to Hawaii. Diphyllobothrium ova were also found in the stool. The only raw fish he recalled eating in previous months were tuna sushi and lomi-lomi salmon which usually contains raw but previously frozen salmon. Of these two fish, only salmon which is not native to Hawaiian waters, has been incriminated as a significant source of diphyllobothrium fish tapeworm infection. Freezing kills this parasite, however, we speculate that the raw fish in the lomi-lomi salmon that our patient had eaten had not been pre-frozen or was not adequately pre-frozen. Eating raw salmon without certainty that it has been adequately pre-frozen carries the risk of diphyllobothriasis or fish tapeworm infection.

Introduction

The custom of eating raw seafood has become increasingly popular in the United States over the past two decades largely due to Asian influences. Sashimi (sliced bite-size pieces of raw fish and other seafood delicacies), sushi (small portions of seafood pressed onto rice patties) and lomi-lomi salmon (chopped raw salmon, tomatoes, onions, green peppers and soy sauce) are popular foods in Hawaii that are currently consumed in increasing quantities at trendy Japanese restaurants across the United States. Many of these seafood delicacies harbor parasites that may be harmful to humans and raw salmon is foremost among them. We report a child with diphyllobothriasis who had previously eaten foods containing raw salmon and tuna. Of these two fish, only salmon which is not native to Hawaiian waters, has been incriminated as a source of diphyllobothrium fish tapeworm infection.

Correspondence to:
James W. Bass MD
Department of Pediatrics
Tripler Army Medical Center
Honolulu HI 96859-5000
TEL: (808) 433-6474
FAX: (808) 433-4837
E-mail: jimbass@pixi.com

Key Words: diphyllobothriasis, diphyllobothrium, salmon, sushi, sashimi, fish tapeworm

The opinions or assertions contained herein are the private views of the authors and are not to be construed as official or as reflecting the views of the Department of the Army or the Department of Defense.

Illustrative Case

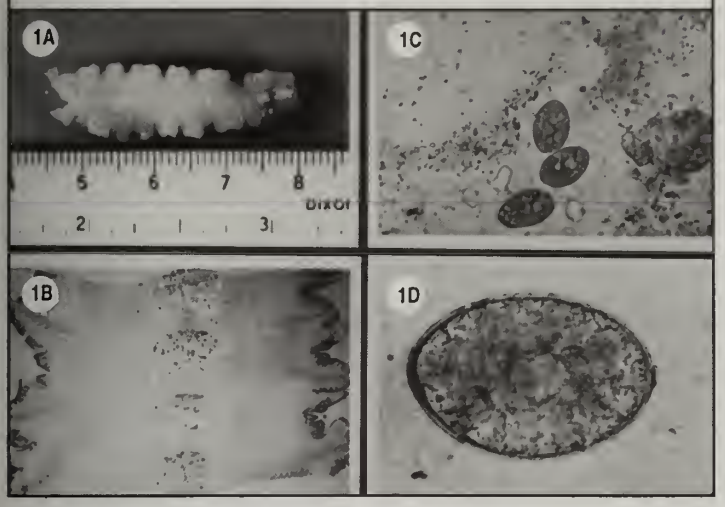
An 11-year-old boy presented to our Pediatric Clinic with the chief complaint of passage of mucus and a moving object in his stool. He denied other symptoms and physical examination was within normal limits except for moderate obesity. The stool specimen he brought with him contained a three by one centimenter tapeworm segment consisting of 17 proglottids *(Figure 1A)* of the fish tapeworm Diphyllobothrium species. A smaller segment of four proglottids was fixed, sectioned and stained and the segmental nature of the proglottids which are characteristically wider than they are long is evident. Centrally positioned rosette shaped uteri containing numerous ova are seen in each proglottid *(Figure 1B)*. Numerous identical ova were seen in stool wet-mount preparations *(Figure 1C)*. These ova, on higher magnifications, exhibit opercula on one end with abopercular knobs characteristic of Diphyllobothrium species *(Figure 1D)*. On questioning the child recalled having eaten raw tuna sushi and lomi-lomi salmon, which usually contains raw but previously frozen salmon, within the previous three months. He was treated with a single dose of praziquantel; 600 mg orally. He was asked to bring in any further suspected worm parts in his stool for identification but none were seen and his stools returned to normal the following day. Repeated stool examinations from the patient and all members of his family were negative for proglottids or ova.

Discussion

Diphyllobothriasis in North America has been most commonly associated with *D. latum* acquired from eating uncooked or inadequately cooked fresh water fish from the waters of Alaska, Canada and the Great Lakes regions of the United States.[1] Salmon have been the most common cause of infection with this parasite in Japan.[2] The custom of eating raw fish has become increasingly popular in western cultures over the past two decades and eating raw salmon may now be the major source of diphyllobothriasis in the United States.[3,4] Cooking infected fish for at least 56° C for five minutes or freezing at -18° C for 24 hours or -10° C for 72 hours kills *Diphyllobothrium* species rendering infected fish safe to eat.[3]

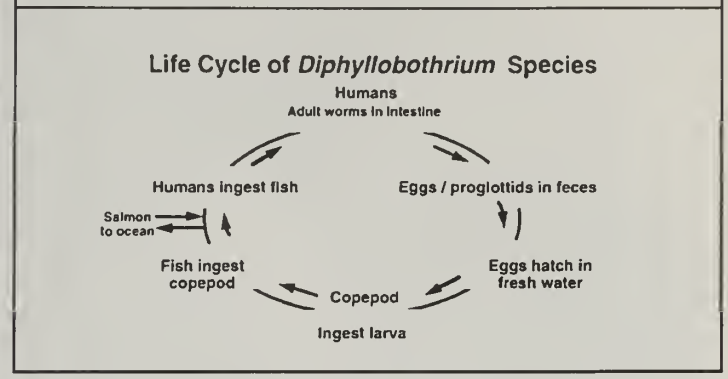
Species identification of the genus *Diphyllobothrium* requires examination of the intact worm including the scolex, strobila and individual proglottids which was not recovered from our patient.[1,4,5] Of the 12 species of *Diphyllobothrium* only a few have been found to infect man: *D. latum, D. dendriticum, D. pacificum, D. ursi*, and *D. klebanovswkii.*[6] *Diphyllobothrium dendriticum, D. uri* and *D. klebranovswkii* have most often been incriminated in Alaskan salmon infections and one of these species was probably the cause

Fig. 1A - 1D.—Diphyllobothriasis After Eating Raw Salmon
Hutchinson JW, Bass JW, Demers DM, Myers GB



1A.—The strobila or chain of proglottids of the tapeworm *Diphyllobothrium* species that was passed in the patient's stool. **1B.**—Fixed, sectioned and stained segment of four proglottids each showing central rosette shaped uteri with small dot-like ova within (X 10). **1C.**—Operculated ova of *Diphyllobothrium* species in a wet-mount preparation of the patient's stool (X 200). **1D.**—Same ova under higher magnification (X 1000).

Fig. 2.— Diphyllobothriasis After Eating Raw Salmon
Hutchinson JW, Bass JW, Demers DM, Myers GB



Life cycle of *Diphyllobothrium* species. Salmon become infected during the fresh water phase of their life-cycle. Young fingerlings may eat many types of fresh water crustaceans including copepods in route to the ocean. Mature salmon return from the ocean to spawn and die. Infection can occur when salmon taken from either the ocean or from fresh water are eaten raw by mammals.

of infection in our patient.[7] Of the two types of raw fish he had eaten, tuna, which are pelagic fish, do not harbor this parasite while salmon, which are anadromous fish which must leave the ocean to spawn in fresh water rivers and lakes, have zoologic studies documenting a high rate of *Diphyllobothrium* infection.[3] We speculate that the raw fish in the lomi- lomi salmon that our patient had eaten had not been pre-frozen or was not adequately pre-frozen.

Most commercial salmon in the United States come from Alaska where the fish are shipped to markets frozen. In recent years there has been a trend to ship fresh unprocessed Alaskan salmon to markets when processors are overwhelmed by large salmon runs. In 1980 such a bumper catch of salmon occurred in Alaska and a large number were flown fresh chilled but unfrozen to market in other states primarily those along the west coast.[3,4] Prior to 1982 the Parasitic Disease Drug Service at the Centers for Disease Control was the only source of niclosamide in the United States and in 1980 there was a deluge of requests for this drug from physicians to treat patients with diphyllobothrium tapeworm infection. There were 17 requests in 1979 while there were 59 in 1980. Of 39 of these patients interviewed all recalled eating raw salmon and all denied eating any other fish known to transmit fish tapeworm infection.4 The following year niclosamide was licensed for general use in the United States so there is no record of how often this drug has been used to treat diphyllobothriasis since 1982.

In addition to being a source of diphyllobothrium infection salmon may harbor anisakis parasites.[8-10] In a survey of 50 wild caught salmon taken off the Washington coast all were infected with *Anisakis simplex*.[8] Eating raw fish infected with this parasite has been associated with severe gastrointestinal symptoms and complications including intestinal perforation. The only treatment for anisakiasis is surgical or endoscopic removal of the parasite.[11] A patient in Hawaii has been reported who developed severe gastrointestinal symptoms after eating raw lomi-lomi salmon.[12] During endoscopic examination an *Anisakis simplex* worm embedded in the gastric mucosa, was removed. When lomi-lomi salmon purchased at a commercial market in Hawaii was examined numerous worm fragments and whole viable *Anisakis simplex* worms were found. In their review the authors concluded that in nearly all known human cases of anisakiasis with tissue involvement in the United States, salmon were the source of infection. Cooking to at least 60° C for five minutes or freezing at -20° C for 60 hours prevents this infection.[3]

Several studies have shown that parasitic infection from eating raw fish occurs most commonly when the food is prepared at home and that it rarely occurs from consuming raw fish at sushi bars in Japanese restaurants.[13] However, as recently as 1989 a survey of 23 sushi bars in New York City revealed that all served raw salmon.[14] It has been shown that cold smoking and most methods of marinating and brining cannot be relied on to kill anisakid worms and visual inspection can not be counted on to reveal all larvae.[13] Unless the raw salmon served in these and other sushi bars or raw salmon purchased for home consumption has been pre-frozen, there is risk of infection with anisakid roundworms, as well as diphyllobothrium tapeworms, when this fish is eaten raw.

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The videotape provides viewers with information on organ and tissue donation from the perspectives of four key individuals. These individuals are: 1) a Filipino kidney recipient; 2) a donor family member; 3) a professional educator of ODCH; and 4) a Filipino priest of the Catholic Diocese of Honolulu. Barriers that hinder Filipinos from becoming organ and tissue donors are addressed and information on why it is important for more Filipinos to become organ donors is provided.

ODCH's hopes to effectively reach more people in the community through the use of the videotape to increase their awareness on the need for more organ and tissue donors within the Filipino community as well as within other ethnic groups. In Hawaii, despite the high need for organ transplants, the Filipinos have the lowest donation rate in comparison to other ethnic groups.

In Hawaii, kidney failure hits Filipinos and Hawaiians harder than any other ethnic group. Filipinos and Hawaiians account for almost half of Hawaii's dialysis population, but only make up 28 percent of the Island's total residents. As of May 1997, 31 Filipinos (of a total of 152) are waiting for a lifesaving organ transplant in Hawaii statewide. All forty-one are waiting for a kidney transplant. In comparing the waitlist as of September 1995 to May 1997, the percentage of Filipinos waiting almost doubled from 15.7% to 27% as they continue to be the largest waitlist group in need of an organ transplant.

The production of the videotape was made possible through a $5000 grant received by ODCH from the Atherton Family Foundation. Interested individuals and organizations wanting a free copy (while supplies last) of the videotape may call Angie Iaea at (808) 599-7630. Neighbor islands may call 1-800-695-6554.

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Avoid contact with eyes and all mucous membranes.
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2. This medication should not be used for any disorder other than that for which it was prescribed.
3. Patients should not use any other topical acne preparation unless otherwise directed by physician.
4. Patients should report to their physician any signs of local adverse reactions.
5. BENZAMYCIN® Topical Gel may bleach hair or colored fabric.
6. Keep product refrigerated and discard after 3 months.

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Pregnancy: Teratogenic Effects: Pregnancy CATEGORY C: Animal reproduction studies have not been conducted with BENZAMYCIN® Topical Gel or benzoyl peroxide.
There was no evidence of teratogenicity or any other adverse effect on reproduction in female rats fed erythromycin base (up to 0.25% diet) prior to and during mating, during gestation and through weaning of two successive litters.
There are no well-controlled trials in pregnant women with BENZAMYCIN® Topical Gel. It also is not known whether BENZAMYCIN® Topical Gel can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. BENZAMYCIN® Topical Gel should be given to a pregnant woman only if clearly needed.

Nursing Women: It is not known whether BENZAMYCIN® Topical Gel is excreted in human milk after topical application. However, erythromycin is excreted in human milk following oral and parenteral erythromycin administration. Therefore, caution should be exercised when erythromycin is administered to a nursing woman.

Pediatric Use: Safety and effectiveness of this product in pediatric patients below the age of 12 have not been established.

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In controlled clinical trials, the total incidence of adverse reactions associated with the use of BENZAMYCIN® Topical Gel was approximately 3%. These were dryness and urticarial reaction.
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BENZAMYCIN® TopMical Gel should be applied twice daily, morning and evening, or as directed by a physician, to affected areas after the skin is thoroughly washed, rinsed with warm water and gently patted dry.

Important to the Pharmacist
Prior to dispensing, tap vial until powder flows freely. Add indicated amount of ethyl alcohol (70%) to vial (to the mark) and immediately shake to completely dissolve erythromycin. Add this solution to gel and stir until homogeneous in appearance (1 to 1½ minutes). BENZAMYCIN® Topical Gel should then be stored under refrigeration. Do not freeze. Place a 3-month expiration date on the label.

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Project Caring for Life— Long-Term Care Funding Alternative

Leonard G. Katsarsky
Vice-Chairman of the Hawaii Long-Term Care Reform Task Force

Introduction

The Eighteenth Legislature, 1995, State of Hawaii sanctioned the establishment of the Hawaii Long-Term Care Reform Task Force as a matter of compelling State interest to design a system of long-term care services for Hawaii's citizens requiring long-term care that is affordable, available, and of high quality. The system would meet current and growing LTC needs; identify and plan new services and delivery systems, and determine how to pay for these services using both public and private funding.

Unfortunately, our society has not made adequate provisions for financing the cost of long-term care. Individuals and families are going broke, the Federal and State Medicaid program is stretched to the breaking point, and the need for long-term care is growing to epidemic proportions. Only society acting in concert will solve this problem.

We are faced with a difficult situation which must be addressed. Solutions will be complex, multifaceted, and demand much creativity. There are no quick fix solutions. One size will not fit all. Hard choices must be made. Difficult decisions will be required from both the Hawaii State Government and the individual citizens which they represent.

The bottom line is, in order for any LTC financing program to work in the State of Hawaii, it must be understandable and acceptable to the constituency. They must have choices and be made aware of them. Once this is achieved and a course of action is determined, legislation to activate the system should take place.

The purpose of the following funding concept is to provide the task force with a sample framework for a long-term care system which could be used as a yardstick for other alternatives as they are considered. It is by no means complete and in order to be effective will require modification and expansion as additional thoughts and information become available. It does however, provide us with much of the LTC situation as it is now; discusses many of the shortfalls and concerns within the system as it now exists; puts in writing the criteria we have committed to in our design of an improved LTC system; and provides us with a LTC financing concept that will serve as a basis of comparison for all other funding alternatives presented.

Background

Definition

Long-term care includes subacute, rehabilitative, medical, and nursing care for people who have functional limitations or chronic health conditions and who need ongoing health care or assistance with activities of daily living. Long-term care services are provided in a variety of settings, including nursing facilities, assisted care living facilities, adult day care, home, and community based settings.

Examples of activities of daily living include bathing, dressing, eating, toileting, maintaining continence and transferring from bed

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to chair. Inability to perform activities of daily living (ADL'S) could be due to either physical or cognitive impairment.

Objectives

Senate Concurrent Resolution No. 121, H.D.1, dated May 12, 1995 sanctioned and expressed support for the Hawaii Long-Term Care Reform Task Force. The following long-term care objectives were requested by SCR121, and subsequently adopted by the task force:

1. Study and understand what Hawaii's long-term care needs are and what costs are associated with those needs.
2. Study and understand what resources are available for long-term care for today's elderly and disabled and those who will become the elderly and disabled in about twenty years.
3. Study and evaluate barriers to the provisions of community based services, and the construction of new facilities.
4. Educate the general public about the issue.
5. Establish the framework for implementation of a long-term care system.

Criteria

SCR121 and the Task Force Vision Statement provide the criteria necessary for the design of such a LTC system. They describe a LTC system that should:

1. be affordable.
2. cover as broad a segment of the population as is feasible.
3. significantly offset Medicaid LTC costs.
4. be financially stable over time.
5. offer a comprehensive and cost-effective benefit package with both institutional and home and community based care options.
6. be financed primarily through private funding and secondarily through a public safety net.
7. meet the needs of the Hawaii consumer, providers, and payors.
8. offer a full continuum of care between the nursing home and the home in the least intensive, most appropriate, and affordable settings.

Present Situation

LTC Statistics

The following statistics provide a snapshot of the LTC situation as we know it today and portray the magnitude of the problems that face us from both a national and local perspective.

1. Risk of needing nursing home / home health care

According to The Health Insurance Association of America, 46.8% of people over the age of 65 will spend some time in a nursing home. The odds increase to 71.8% for those who will receive long-term care in the home environment. This statistic becomes even more alarming when we realize that Hawaii has one of the fastest growing percentage of citizens living over the age of 85 in the nation.

2. Available nursing home bed space

National - 56.7 Beds/1000 Population (Age 65+).
Hawaii - 25.8 Beds/1000 Population (Age 65+).

3. Average stay in a nursing home:

National - Less than 4 Years.
Hawaii - 2 Years.

This statistic should not lead to the conclusion that people in Hawaii are healthier on average than the rest of the nation. The fact of the matter is we lack sufficient bedspace to accommodate our needs. In most cases there are waitlists and therefore, many of the patients are entering nursing homes during their latter stages. Also, the culture of Hawaii favors caring for family members in a home environment for as long as possible.

4. Estimated annual nursing home cost:

National - $20,000 - $100,000/Year.
Hawaii - $42,000 - $80,000/Year.

These costs appear to increase at an approximate 5% annual rate.

5. Estimated daily home health care cost:

Hawaii - $15 - $25/Hour
(2-4 hour minimum for ADL assistance)

These figures represent the typical cost on Oahu for licensed custodial personnel to provide ADL assistance in the home environment. A registered nurse charges around $35/hour for a home visit.

Levels of Long-Term Care:

Before addressing the present options available and future alternatives contemplated to pay for LTC we should first have a clear understanding of the levels of LTC and how they impact on the problem.

1. **Skilled nursing care** is defined as daily nursing and rehabilitative care, ordered by a doctor, that can be performed only by, or under the supervision of skilled medical personnel.
2. **Intermediate nursing care** requires occasional nursing and rehabilitative care, ordered by a doctor, that can only be performed by, or under the supervision of skilled medical personnel.
3. **Custodial Care** is care of a nonmedical nature provided for persons who cannot perform such basic living activities as eating, bathing, and dressing without assistance.

A LTC survey conducted by Harvard University for the U.S. House of Representatives included a study of these levels of care and determined, based on actual confinements to nursing homes, how each of these levels impacted on the problem of LTC. They concluded that .5% of the patients required Skilled Care, 4.5% required Intermediate Care, and 95.0% required Custodial Care. These statistics were reconfirmed by the Health Care Financing Administration in 1996.

Present Pay Alternatives

Medicare

Medicare is and always has been aimed at paying for acute and post-acute restorative care, not LTC. Medicare only addresses LTC at the skilled level. To qualify for covered skilled nursing facility benefits, the patient must:

1. Require daily skilled care which, as a practical matter, can only be provided in a skilled nursing facility on an inpatient basis.
2. Be in the hospital for at least three consecutive days before entering a skilled nursing facility that is certified by Medicare.
3. Be admitted to the skilled nursing facility for the same condition for which patient was treated in the hospital.
4. Generally be admitted to the facility within 30 days of dis charge from the hospital.
5. Be certified by a medical professional as needing skilled nursing or skilled rehabilitation services on a daily basis.

If the patient qualifies, Medicare will pay 100% of the approved

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amount for the first 20 days. Medicare provides no coverage after 100 days. Neither Medicare nor Medigap insurance will pay for most nursing home care. Source, National Association of Insurance Commissioners and the U.S. Department of Health and Human Services.

Medicaid

Medicaid is assistance available to help people who are considered indigent or poor pay for health care. The program was never intended to carry the entire financial burden for the LTC costs of our elderly population. To qualify a family must first spend down their assets to poverty level.

Hawaii's Medicaid program has served as a public safety net to assist families that are impoverished to pay medical and LTC expenses. Under current law, with regard to LTC, the Medicaid safety net is only extended to institutional care. Medicaid coverage for the continuum of care provided between the home and nursing home does not presently exist.

Rules governing Medicaid LTC eligibility changed dramatically in August 1993 with the passage of Omnibus Budget Reconciliation Act of 1993 (OBRA). OBRA increased the look-back rules with regard to trusts and significantly changed the way the penalty is calculated and assessed for transfers or gifts within the lookback period. OBRA also requires states to institute recovery programs for all Medicaid services and expenses that are rendered.

Self-Insure (Private Pay)

According to the Health Care Financing Administration, 51% of the LTC costs in the nation are paid by individuals who are self-insured. Unfortunately, the odds are that most individuals who self-insure and require LTC over an extended period of time become impoverished and end up on Medicaid.

Long-Term Care Insurance

Private LTC insurance has been available in Hawaii since 1986 and is a relatively new product in the insurance marketplace. The quality of the product has greatly improved over the past several years. Today, LTC insurance policies include a wide range of benefits, features, and options that cover all levels of care. Many carriers provide coverage for the entire continuum of care stretching from the home to the nursing home. Cost of insurance is generally determined by the level of benefits selected and age at time of issue.

The purpose of LTC insurance is to help people protect themselves and their families from the escalating costs related to LTC. The circumstances for each person or family are generally different. They should therefore be provided with sufficient information to make an informed LTC decision based on their situation. If a LTC insurance program is appropriate it should reflect their situation as best they can afford it.

LTC insurance is not necessarily the answer for everyone. Different situations dictate different solutions. For example, an individual with limited assets and low income may better be served by spending down their assets and then going on Medicaid. Individuals with certain health problems or disabilities may not be able to qualify for coverage and other solutions would be required.

Product Overview

Level of Participation: LTC and how we prepare for it is a major problem that faces all generations. It is a problem that society must solve. The criteria established for the design of Hawaii's LTC system dictates a system that is responsive to the LTC needs of the people it serves. In order for a LTC system of the magnitude envisioned for the entire State of Hawaii to work it must require the participation of all tax paying citizens. If all citizens are expected to participate they should be given choices that result in a course of action that best reflects their situation.

Continuum of Care

Hawaii's nursing homes are overcrowded and costs are escalating. According to a national study conducted by Harvard University, 95% of the patients in nursing homes require care at the custodial level. Whether or not these statistics are accurate, when applied to Hawaii, it is considered acceptable to assume that when examining the entire spectrum of care from home to nursing home a preponderance of the care required is at the custodial level.

It makes sense for Hawaii to take the necessary steps to create an environment that would fill the continuum between the home and nursing home with services and delivery systems that adequately support LTC at the custodial level. This would not eliminate the requirement for nursing homes but it should take pressure off them and provide our citizens with alternatives that may better fit their situation. Filling the continuum may also help control and reduce the overall cost of care to patients and their families.

Public Safety Net

Medicaid has served as Hawaii's public safety net to assist those who are impoverished pay for LTC. When we consider the overall lack of bedspace that presently exists in Hawaii's nursing homes it becomes evident that our safety net has a hole in it. Medicaid only pays for LTC at the institutional level. If the continuum of care were expanded and Medicaid assistance were extended to include the continuum of care, it would appear, more people could be taken care of in a more cost effective environment.

Funding Choices

Hawaii has one of the fastest growing populations of citizens living over the age of 85 in the nation. The odds are overwhelming that most of them will require LTC sometime in their life. Neither the state nor the nation has adequate financial resources to cope with the problem. Statistics reflect society has not made adequate provisions and that 92% of today's LTC bills are paid either by Medicaid or individuals who have chosen to self-insure. Unfortunately, most of those who self-insure and require LTC over an extended period of time become bankrupt and go on Medicaid.

When it comes down to who should be held accountable to pay for the system, the choices are limited. Every taxpayer above the level of poverty would be required to contribute to the funding of the system by electing to either to pay an annual LTC assessment based on their income or purchase a LTC insurance policy and transfer the risk to the insurance company. Individuals, at their own discretion, would be allowed to change their funding options to better reflect any changes in their personal situation. Those who elect to pay the assessment would still be required to spend down their assets prior to qualifying for Medicaid. The revenue generated through the collection of assessments would be utilized to offset Medicaid costs incurred at service and support levels below the nursing home. For

purposes of this concept paper it is assumed the annual assessment would not exceed 1% of gross income.

It is anticipated there would be an immediate influx of funds which could be used initially by the State to support the creation of a LTC environment of care between the home and the nursing home that is affordable, available, and of high quality.

Incentives

Appropriate incentives/disincentives should be created for both options to reflect the potential impact of each decision on the system. For example, those that would elect to pay the annual assessment would still be required to spend down their assets prior to qualifying for Medicaid assistance. However, if they do qualify and receive Medicaid, the entire sum of their assessed fees paid into the system would first be deducted from Medicaid's costs before any cost recovery measures are taken as required by OBRA93. Conversely, if the assessment option were elected and Medicaid assistance is not required, the entire sum of fees paid would be credited as a deduction from the participant's final estate taxes.

The obvious incentive for those who purchase LTC insurance would be an income tax deduction for the paid premium. On 21 August 1996, President Clinton signed into law "The Kennedy/ Kassebaum Bill, Health Insurance Portability and Accountability Act." The law provides the following federal tax incentives for those who purchase tax qualified LTC insurance.

1. Individual Participants: A deduction up to certain age-related limits of their LTC insurance premiums, plus all LTC out of pocket expenditures, as part of the medical expense deduction over 7.5% of adjusted gross income on the federal tax form.
2. Employer Deductibility: All employer LTC premium contributions for employees are deductible to the employer as a business expense and non-taxable to the employee. Premiums paid on behalf of their employee's spouses are in fact also tax deductible as a business expense.
3. Self-Employed: 40% of the LTC premium is deductible as a business expense.

Product Examination

The purpose of the following product examination is to contrast the LTC funding alternative, as proposed, with the product design criteria established by SCR121 and Project Hawaii Cares' Vision Statement.

Criteria: LTC System should be affordable.
Discussion: In concept, the LTC Funding Alternative should be affordable. For the sake of this concept paper, it is assumed that the cost for the assessment option would not exceed 1% of annual gross income. The cost of LTC insurance is generally determined by the level of benefits selected and age at time of issue. By expanding the continuum of care and extending Medicaid to include the continuum of care below institutional level, it would appear, more people could be taken care of in a more cost-effective environment.
Criteria: LTC System should cover as broad a segment of the population as is feasible.
Discussion: Definitely. This system is designed to cover every citizen that requires LTC.
Criteria: LTC System should significantly offset Medicaid costs.
Discussion: Yes. By design, the Medicaid safety net has been extended to include the continuum of care below the nursing home. Much of this cost should be absorbed through funds obtained from participants that elect the assessment option.
Criteria: LTC System should be financially stable over time.
Discussion: As people become better informed about LTC and are made aware of their alternatives, it is anticipated a great percent of them will elect to purchase their own coverage through a LTC insurance policy. Also, at their own discretion, individuals would be allowed to change their funding option to better reflect their personal situations.
Criteria: LTC System should offer a comprehensive and cost-effective benefit package with both institutional and home and community based care options.
Discussion: Yes. By design.
Criteria: LTC system should be financed primarily through private funding and secondarily through a public safety net.
Discussion: Yes. By design.
Criteria: LTC System should meet the needs of the Hawaii consumer, providers, and payors.
Discussion: Yes. The Medicaid safety net has been extended. The continuum of care has been expanded to include more services and delivery systems.
Criteria: LTC System should offer a full continuum of care between the nursing home and the home in the least intensive, most appropriate, and affordable settings.
Discussion: Yes. By design.

Summary

The synopsis of The Hawaii Long-Term Care Task Force describes the product of project :"Caring ... For Life" as "the framework for implementation of a long-term care system. Framework will encompass promotion, programs, education, legislation and other initiatives necessary for an effective system. The product will be a combined effort of the private sector and government to bring about changes which will provide a continuum of services to all residents in need of long-term care in the least intensive, most appropriate and affordable setting."

The purpose of this concept paper has been to paint the big picture of LTC as it now is and provide, in concept, an alternative picture of what it could be. It is by no means complete but hopefully will serve as an initial effort to be addressed and, if appropriate, be expanded upon or modified. It could also serve as a basis of comparison for other alternatives as they are considered.

Long-term care is a complex problem, there are no quick fixes. The solution will require great imagination and the ultimate of our creativity. The product should be flexible and above all, should be able to stand the test of time.

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Council Highlights

Friday, June 6, 1997
Roger Kimura MD, Secretary

The meeting was called to order by Dr Spanger, President at 5:32 p.m.

Those present were Drs L. Howard, President-elect; C. Lehman, Immediate Past President; R. Kimura, Secretary, C. Kelley, Treasurer; AMA Delegates: C. Kam, A. Kunimoto; Speaker: H.K.W. Chinn; County Presidents: L. Sonoda-Fogel - Hawaii, W. Dang Jr. - Honolulu, G. McKenna - Kauai, A. Bairos - W. Hawaii; Councilors: T. Au, M. Shirasu, B. LeeLoy; Past Presdidents: W. Chang, W. Dang, G. Goto, J. Lumeng, J. McDonnell; Young Physician Delegate: G. Caputy.

HMA Staff: J. Won, B. Kendro, N. Jones, P. Kawamoto, J. Asato, A. Rogness - recording secretary.

• Distinguished Medical Reporting Awards (DMRA): Dr Roger Kimura, Chair of the Public Relations Committee noted that the DMRA started 33 years ago. He presented certificates of recognition and prizes for the following categories: Not-for-profit Newsletter, Magazine or Newspaper Reporting - Michael Tsai (Article - "They Don't Inhale," HMSA's Island Scene Magazine); Radio Reporting - Dr Mark Schlacter (Women's Health Issues on the show Country Doctor, KGU radio); Commercial Newspaper or Magazine Reporting - Beverly Creamer (Article - "Stroke Therapy Works Miracles - Quick Action Crucial Doctors Say," Honolulu Advertiser); Television Reporting - Sandra Sagisi (Women on Ice) KGMB.

• Dr Spangler reported: 1) that the HMA is still working on the rabies issue and has met with Calvin Lum and veterinarians. HMA does not agree with the statistics on the risk assessment and will be obtaining more information for reconsideration; 2) Drs. Howard and Spangler will meet with the Chiropractors to go over their final order petition and give medical input; 3) The AMA meeting in Chicago will be from June 22-26; 4) The next Council meeting will be on July 11 instead of July 4. The agenda will be to review the Governance Section of the Restructuring Task Force. A summary of the May 3 Special House of Delegates will be distributed at the meeting.

• Alliance President, Cherlita Gutteling submitted a written report of the Alliance activities.

Mrs. Yuen on behalf of the Alliance to the HCMS and Eli Lilly and Co. made a presentation of their gift to the Hawaii Delegation to the AMA of white coats with an HMA emblem in celebration of 150 years of medicine. There was concern raised by an HMA officer that there is a problem with two conflicting groups within the HMAA of which neither possess the necessary legal documents to represent the Hawaii Medical Association at the AMA meeting in Chicago. There was concern that there may be two delegations from the Alliance attending the AMA meeting claiming to be the HMAA. It was noted that HMA can only endorse or not endorse an Alliance to represent the HMA. Due to turmoil within the Alliance, HMA offered to hire an attorney at HMA's expense to mediate concerns between the parties, however the Alliance declined.

For Action

• A motion was passed by Council that HMA withdraw approval of any organization representing HMA as the Alliance at this time and that the HMA request that the AMAA be informed of this action and that anyone claiming to be an HMA Alliance representative at the meeting in Chicago be given guest credentials. A registered letter would be sent from the HMA President with a copy to the AMAA.

• Council approved the nomination of Dr Scott Hundahl as the University of Hawaii's representative to the HMA Cancer Commission.

• A motion was passed by Council that any physicians who want to join HMA because of the PGMA lawsuit must be in good standing and will be assessed the prevailing dues rate at the time they join.

• A motion was passed by Council to send out letters from HMA requesting historical data on the 1996 worker's compensation rates.

Component Society Reports

Honolulu.—Dr Dang, Jr. reported that there will be an HCMS membership meeting on June 18 on the topic of "Safety in the Office," particularly on preventing and treating needle sticks.

Maui.—No report

Kauai.—Dr McKenna reported that their county has not met. He recently represented Kauai from the Physicians' Health Committee at an international conference on physicians health in Norway. There was a lot of concern about changes in ethical standards within medicine and whether medicine would be able to withstand the changes. He did a paper on The Impact of Managed Care on Physician' Health . It was noted that Europeans are unionized and therefore have a union representative negotiate with insurance carriers, etc. The physicians in Europe have the same problems with stress, overworking, substance abuse and disruptive physicians.

West Hawaii and Hawaii.—Both counties have not met but will have a meeting in June.

For Information

Fruit Irradiation Facility, Hilo.—Dr Fogel noted that money has been allocated by the Hawaii County Council for the facility. Waimea and Kohala seem to be the favored areas because of little seismic activity and little threat of volcanic flow. The problem is the potential health hazard to the community due to radiation leakage if an earthquake should occur. HMA sent letter to all the Hawaii County Council members expressing this concern and is presenting a resolution to the AMA.

Hawaii Health Information Corporation.—Dr W. Dang, Jr. who sits on the HHIC board as a representative for the HMA reported that HHIC does not release information on individual physicians, (such as in the case of economic credentialling), unless the individual physician is requesting the information or gives permission to release the information.

Meeting was adjourned at 7:55 p.m.

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News and Notes Henry N. Yokoyama MD

Life in These Parts

KHVH News: Prison escapee recaptured. He was not hard to spot running down Dillingham Blvd. without his pants and leaving a trail of blood. He had lost his pants climbing the razor wire fence and had cut himself as well.

Paul Harvey reports: "This was a bad season for flu. 20,000 deaths were attributed to flu."

"Prevention of Alzheimers: First Advil and now 3 to 4 glasses of Bordeau."

What you don't want to hear if you wake up during an operation. Surgeon saying, "If that's the spleen, what is that?"

Our Hawaii Medical Association was concerned about the Hawaii county fruit irradiation facility which would use radioactive Cobalt-60. **John Spangler**, HMA President; **Steve Moser**, HMA Environmental Health Committee chairman; and **Fred Holschuh**, Hilo Medical Center ER physician, past HMA president signed the HMA letter to the Hawaii County which expressed concern about the safety of a nuclear facility in a geologically active area like Hilo and suggested seismic studies before construction.

Bad Writing Contest

An academics' **"Bad Writing Contest"** was held at Canterbury University in Christchurch, New Zealand. All entries in the contest were gleaned from published academic works and the top three offenders were all English professors, **Rob Wilson**, a tenured English professor at University of Hawaii won 2nd place with a sentence which read in part: " If such a sublime cyborg would insinuate the future of post-Fordist subject, his palpably masochistic locations as ecstatic agent of the sublime superstate need to be decoded as the "now-all-but-unreadable DNA" of the fast deindustrializing Detroit." Contest judge Denis Dutton, senior lecturer in the philosophy of art at Canterbury University said, "The contest showed that academics and major publishing houses have been so busy using the "magical incantations of jargon, they've forgotten what real thinking is. There is an endless ocean of pretentious turgid academic prose being added to daily, and we'll continue to celebrate it." *(Submitted by our editor, Norman Goldstein)*

Beware the PDR

Physicians and pharmacists, who answer emergency calls at the San Francisco Poison Control Center, say that the Physicians' Desk Reference, gives faulty and possibly fatal, advice on treating overdoses. The group surveyed 8 doctors who had called in for help and found that in the past year, half had turned to the seven pound, 3,000 page tome, listing information from manufacturers. Six drugs often used in deadly overdoses were reviewed in the 1994 edition and in each case, the PDR recommended treatments were dangerous, ineffective or simply outdated. Medical Economics, the PDR's publisher states that several flaws have been fixed in the 1997 edition. *(From Scientific American May 1997)*

Physician Moves

Retiring

Honolulu physician **Bruce Chrisman** announced his retirement effective May 31.

And more Retirements

Honolulu physician **Cesar B. deJesus** retired effective June 1 after 40 years of practice.

HMA Officers Elected

A special HMA House of Delegates meeting on April elected **Leonard Howard President-elect** for the balance of 1997. Leonard had served as HMA treasurer for the last 17 months. Leonard practiced OB Gyn for 35 years, 10 years with the military, 6 years private and 19 years with Kaiser.

Charles Kelley, Straub occupational medicine specialist was nominated and elected by the HMA Council at their meeting on May 2 to serve as treasurer for the balance of 1997. Charles had completed his first term as a HMA councilor and served on the Finance Committee of the HMA Reorganization Task Force.

Oncology Conference

An 84-year-old homeless man was found unconscious in Aala Park and ended up in Kuakini ER. Surgeon **Andrew Oishi** (being second or third generation Japanese-American) had a language barrier because the man spoke only first generation Japanese. The alcohol level was over 0.14 (anything over 0.10 being legal intoxication). The patient had a successful CABG in 1996 and was in a nursing home from whence he had departed without permission. Admission Hb was 12.0 and occult blood positive. BE showed a constricting lesion near the splenic flexure. The patient had a successful colectomy, but the liver was cirrhotic and of 16 harvested nodes, 1 was positive. The pros and cons of further therapy were aired by attending radiotherapists, chemotherapists and pathologists. **Ken Sumida**, moderator, aptly summarized the situation: "It is recommended that no adjuvant therapy be started because of his cirrhosis, his poor performance status and the social circumstances." (Wot? Can't a guy have just a lil' drink?)

Conference Notes

Managing Hyperlipidemia in Your Office

S.Y. Tan MD, JD, Professor of Medicine, John A. Burns School of Medicine

re Serum Cholesterol & CHD

- Total cholesterol is obsolete. Think 'LDL'
- "The lower the cholesterol below 200, the lower the death rate"

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Six CHD Risk Factors

- Age: male over 45; post menopausal female over 55
- Family history of premature CHD
- Smoking
- Hypertension
- HDL below 35
- Diabetes

LDL Treatment Guidelines: (Treat more aggressively when pt has 2 or more factors)

Risk Factors	DIET	DRUG Rx	LDL Goal
Less than 2	160-190	190	160
More than 2	130-160	160	130
Established CHD	--	--	100

Key Points:

1. Think LDL rather than Total Cholesterol
2. Diet rarely lowers LDL. Use "statins"
3. Treat risk factors, eg diabetes, hypertension
4. For CHD patients, get LDL below 100

Conference Notes

Endoscopic Ultrasound by Donn Marutani, QMC staff gastroenterologist, QMC Friday am 4/18/97

Indications for EUS

- to determine resectability of upper GI tumors ie. esophagus; stomach; pancreas; ampulla
- to locate rectal tumors
- to locate submucosal tumors
- to assess a "questionable" pancreatic mass found by CT or ERCP
- to assess tumor recurrences at anastamotic sites
- to assess choledocholithiasis in "low suspicion" patients
- to assess chronic pancreatitis when studies are negative
- to determine pancreatic involvement in endocrine tumors

Miscellany

We Have Our Ways

A mother and her two young children made several visits to the office. She often mentioned her husband and hoped he would someday come for a general checkup. I'd never met her husband, but I was aware of his place of employment and I'd noticed a man fitting his description, leaving his workplace on several occasions, always smoking a pipe.

One day she came for an exam to see if she was pregnant, having missed two periods. While I was conducting a pelvic exam with vaginal speculum in position, I asked, "Does your husband smoke a pipe?"

She jumped off the examining table, speculum still inserted, and replied, "Yes, he does, Doctor. How can you tell?"

(Condensed version of a story by John Williston MD in Stitches)

A social worker recounted that he'd spent some time one day talking with a pleasantly demented lady in a senior's facility. The next day he returned to see her and greeted her with, "Hello, do you remember my name?"

Without missing a beat, she pointed at the nursing station and replied, "No, I don't , but if you go over to that desk they might be able to help you."

(Story by Romayne Gallagher MD in Stitches, May '97)

Anecdotes

Close Call

(Condensed version) Michael Silver MD, From Stitches, Jan '97 issue

A family doctor sent me an ultrasound report on my OB patient. "The baby was fine and bladder was normal, but the kidneys weren't properly visualized." I noted my advise to him at the bottom of the report. "Suggest you repeat the ultrasound in 2 weeks (for CYA reasons)" and faxed back a copy to him.

His secretary called to inquire about the meaning of 'CYA.' With great difficulty she pried 'Cover Your Ass' out of my secretary. Twenty minutes later the patient called, very concerned, and wanting to know the meaning of 'CYA.'

As I desperately tried to think of a solution, the lights came on in my head. My secretary repeated my explanation to the patient, word for word: "The ultrasound CANNOT YET ASSESS the kidneys." The patient immediately and graciously said good-bye.

Classified Notices

To place a classified notice:

HMA members.—Please send a signed and typewritten ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in HMJ as space is available.

Nonmembers.—Please call 536-7702 for a nonmember form. Rates are $1.50 a word with a minimum of 20 words or $30. Not commissionable. Payment must accompany written order.

For Sale

Misc for sale.—Canon copier model 4050 $1,950; desk 60" x 30" $50.; Credenza 71" x 18" $100. Ask for Nelson 536-7702.

4 in-line X-ray Viewer.—Like new. $385. Call 537-1155

For Sale.—Exam table, drawers. Excellent condition. 536-9888.

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The Weathervane

Russell T. Stodd MD

We live in a world with too many moving parts.

A small study (five patients) of air bag injuries treated at UCLA School of Medicine trauma service revealed that slow speed car crashes carry potential for severe eye injuries. A 20 mph crash caused deployment of the air bag with force sufficient to rupture an eyeball. The driver became legally blind as a result while the passenger (no air bag) was not injured. In another low-speed crash, the patient was wearing rigid contact lenses when the air bag deployed causing bilateral retinal tears with detachment and a macular hole. An interesting side light is that four of the five patients were Asian-Americans, provoking speculation that perhaps shorter stature or shallower orbital rims may have been a factor.

In any given set of circumstances, the proper course of action is determined by subsequent events.

Here are some basic statistics regarding liability lawsuits and malpractice, compiled by a Harvard Medical School study of 30,000 plus New York patients:

—98% of patients given sub-standard care did not sue. Many suffered no harm, or only trivial harm.

—97% of patients who received sub-standard care, and who suffered a significant injury from medical treatment, didn't sue either.

—More than 80% of those who did sue had not received sub-standard care.

—Almost 20% of suits filed didn't even involve any adverse event, but these claims were nevertheless settled for an average payout of almost $29,000.

—Neither the presence or absence of negligence nor of an adverse event, was associated with the outcome of the litigation.

—The single factor which correlated strongly with how much the litigant collected, was how severely the patient was disabled. In cases of permanent disability, the mean payment was more than $200,000.

Hot cornbread and black-eyed peas, you can eat as much as you please.

The team from PHY-COR (pronounced fah-coah - southerners, you know) appeared on Maui to convince one and all interested physicians, that they plan to come to town and take over the Maui Medical Group, the largest single group of physicians on the island. They already have Straub in their pocket and want to integrate the neighbor islands into their warm and loving arms. Their term is vertical integration, and for the uninitiated, that means straight lines from primary care doctor, through specialist and to hospital. More simply, stay within the system; that's how you write a tight medical care contract. While the pitch is for a quality management team to take 17% and run the group efficiently for the benefit of doctors and patients, what it also means is a large, mainland, profit-making organization wants to buy a significant piece of the medical care and contracting in the islands. Somehow one has to wonder if the genesis is truly quality medical care at the fairest cost, or is there perhaps a serious profit motive among all the oratorical meadow muffins?

If the French were really intelligent, they would speak English.

France and Germany are running unemployment rates of 12 to 14%. Both nations have largely socialized health care systems, and rely upon taxation of the work force for funding. The elderly populations are increasing, and the coffers are being depleted. Spending reductions in the realm of 20% are in order, which in France will bring cataracts from $350 down to about $280 per procedure. With a direct income tax of 56% and a value added tax of 20%, French surgeons pay taxes of 70 to 80% annually. The German government has reduced its health care spending by 20%. The level of reimbursement for cataracts which was reduced 33% to $378 in 1996, is expected to decrease further. Both countries anticipate that the budget reductions will result in long waiting lists for elective surgery.

Small business has enjoyed as much of Hawaii as it can stand.

On the economic scene right here in downtown paradise, we find many Hawaii businesses groping and struggling for survival. *Forbes* magazine rated Hawaii last in the nation for job growth. *Dun and Bradstreet* rated Hawaii as the worst in the nation for business and job migration. The March 1997 *Expansion Management* magazine listed Hawaii as the worst state in the nation for doing business. *Financial World* ranked our beloved island state dead last for locating a business. Meanwhile our legislators took bows and posed for photographers as they congratulated each other for the excellent work of the recent session. Tax relief - no way; reduce government - forget it; dance to the music of unions, insurance industry, and banking - you bet!

Forget the health nut stories. Tell me your grosser reminiscences.

T.E. Eckstein & Associates, a Minneapolis research firm, conducted a study analyzing 17 components that measure disease, access to care, lifestyle, occupational safety, disability, violent crime and mortality to produce a so-called number one health state. Minnesota captured the title for 1996, replacing New Hampshire, which dropped to number four due to an increase in the prevalence of smoking. Hawaii ranked third just behind Utah. A sad finding was that the national proportion for smoking has risen 0.4% to 22.6%, reversing previous trends. The "sickest" state was found to be Louisiana, while Nevada has the highest rate of adult smokers at 29.1%. In Hawaii, 20.4% of adults puff on the poisonous, addictive weed.

The certainty of misery is better than the misery of uncertainty.

On the subject of weeds, the present Washington administration, made up largely of the generation of flower children (but he never inhaled!), has backed away from the initial threat to prosecute physicians for discussing marijuana with their patients. The Justice Department and and HHS now have "clarified" their position, and stated that physicians have a right to discuss cannabis use as they would with any other treatment. The real problem, however, is that marijuana doesn't fit into any treatment regimens. The dosage is inexact, the quality and strength are variable, and each inhalation contains more than 400 chemicals, not a predictable, active therapeutic agent. Moreover, patients dose themselves. No drug company is willing to undertake research because there is no patent potential, which means that government grants are needed. Meanwhile 40% of oncologists have recommended marijuana for use in association with chemotherapy. Some ophthalmologists admit their glaucoma patients use cannabis, and some physicians treating AIDS patients, encourage marijuana as an appetite stimulant.

He who steals my purse steals trash. My wheels—that's something else.

If you drive a Honda Accord, keep it carefully protected. Thieves favor cars a few years old, because there is a great demand for parts. Honda parts are interchangeable from year to year, so they are frequently stripped and parts easily disposed. The 1994 Honda Accord EX was the number one stolen vehicle in 1996, closely followed by the Accord LX 1994 and 1996. For the three previous years the Oldsmobile Cutlass was the "winner." The vehicle least likely to be stolen was the 1993 Ford Probe. Honda Accord was the number two best seller in the U.S. in 1996, following number one, the Ford Taurus.

Look for the ridiculous in everything and you will find it.

A man walked into a Burger King in Ypsilanti, Michigan, at 7:50 am, brandished a gun and demanded cash. The clerk said he could not open the cash register without a food order. The man ordered onion rings, but the clerk said they were not available on the breakfast menu. Frustrated, the man walked away.

Addenda—

- Multi-focal lens implants appear to be beneficial except for night driving where they cause greater limitation due to glare.
- Al Gore is Gerald Ford without the pizzazz.
- Leaving sex to the feminists is like letting your dog vacation at the taxidermist.

Aloha, and keep the faith—rts ■

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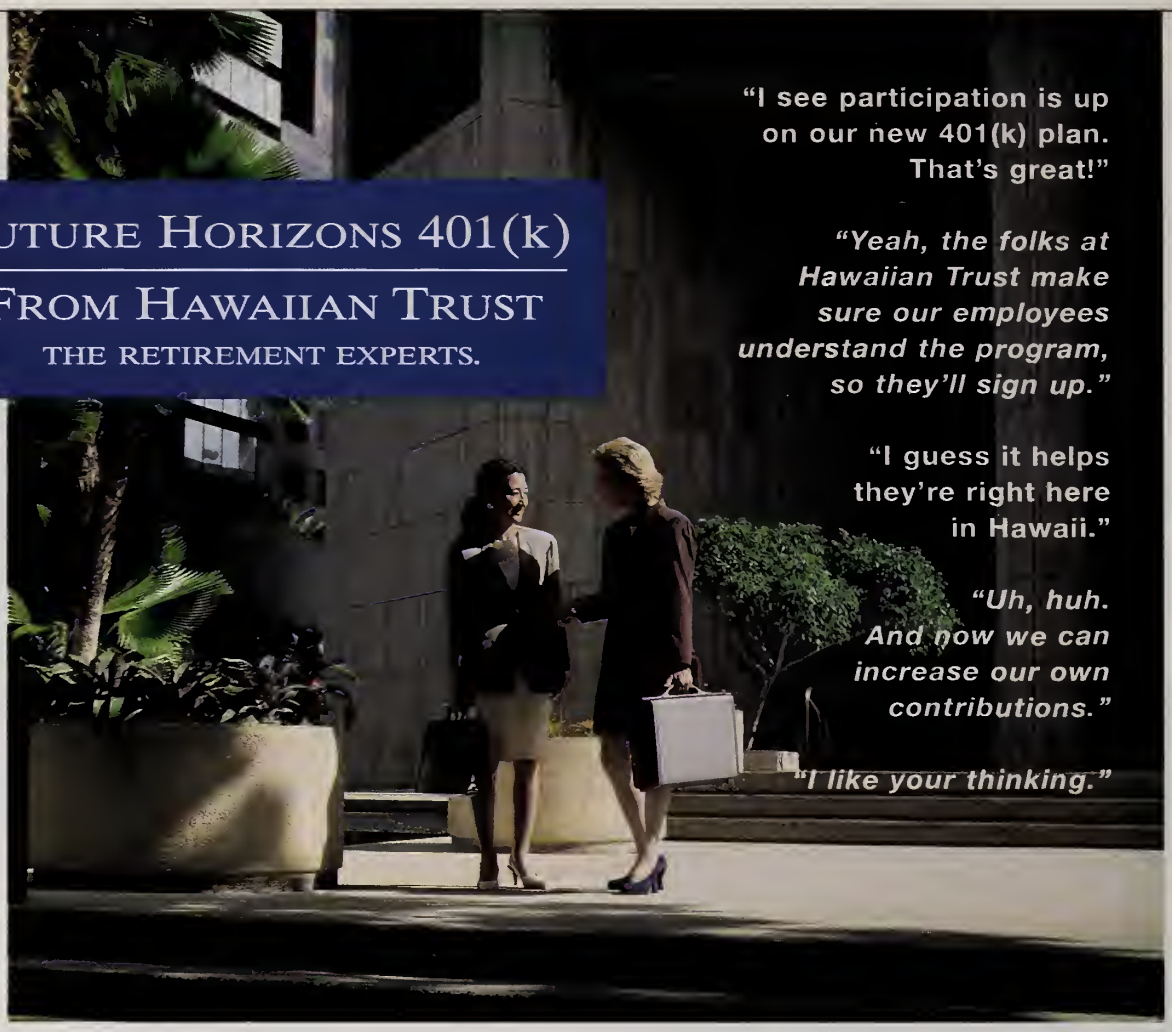
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Lower Extremity Ulcers Arterial vs Venous

Shelly R. Burdette-Taylor, RNC, MSN, CETN

August 1, 1997, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives – At the conclusion, participants will be able to:

- distinguish three characteristics that differentiate arterial from venous ulcers,
- describe two noninvasive diagnostic studies used to evaluate dysvascularity in the lower extremity.

We would like to acknowledge the Educational Grant from: Smith + Nephew, Hill-Rom Home Care, Dauterman Medical & Interstate Pharmacy Corporation.

– Tumor Board Conference –

Cystic and Non-Cystic Pancreatic Neoplasm

David Rattner, MD

August 4, 1997, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives – At the conclusion, participants will be able to:

- recognize cystic tumors of the pancreas,
- differentiate cystic tumors from pancreatic pseudocysts.

– Friday Noon Conference –

Behavioral Neurology: The Borderland Between Psychiatry & Neurology

James W. Pearce, MD

August 8, 1997, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives – At the conclusion, participants will be able to:

- recognize psychiatric and neurology dysfunctions,
- develop skills to distinguish between psychiatric and neurology dysfunctions.

– Friday Noon Conference –
Luncheon*

Statins, Cardiovascular Event Reduction & the Paradox of Cholesterol Lowering Therapy

Robert S. Rosenson, MD, FACC

September 5, 1997, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives – At the conclusion, participants will be able to:

- discuss the role of vulnerable plaque as a cause of acute coronary syndromes,
- review clinical trials of cholesterol lowering therapy with statins in patients with established coronary heart disease.

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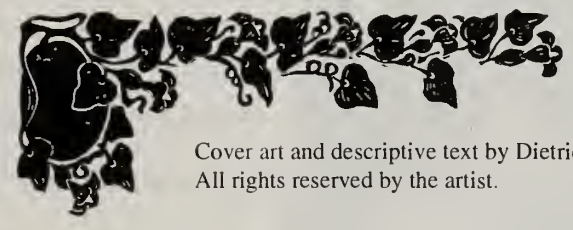
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Hawaiian Canoe Paddlers

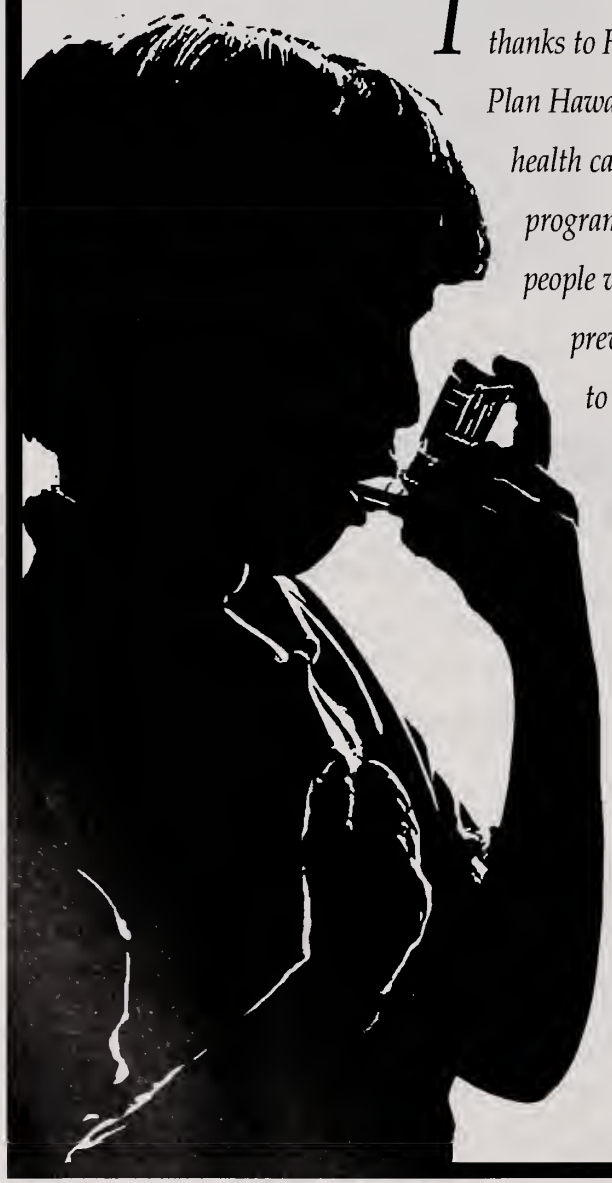
To this day major inter-island canoe races reflect the reverence Hawaiians hold for this sport.

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This summer, asthma patients statewide will breathe a little easier thanks to Hawaii's physician community, HMSA and Health Plan Hawaii. Developed in conjunction with Hawaii's finest health care providers, HMSA's asthma disease management program is an ambitious, long-range project aimed at helping people with asthma better manage their condition through preventive care, health education and enhanced access to health care resources.

The asthma disease management program is a component of HMSA's Community Health Initiative. For more information about the initiative, the asthma disease management program or our upcoming diabetes project, please call Dr. Joseph Humphry at 948-5612 or Dr. Richard Chung at 948-5672.

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Editorial

Norman Goldstein MD
Editor

We are alive and doing very well, thank you. With the support from our staff, Becky Kendro and Carol Uyeda, our Editorial Assistants, Dr Drake Will, Dr Ann Catts and Dr Al Morris, the encouragement of our Publications Committee and Editorial board, and especially our advertising representative, Michael Roth and his staff, the Journal is thriving.

Manuscripts are coming in, Peer Reviewers are doing excellent work and ads are paying off for both advertisers and the Journal. Due to our successful team effort, we have the following special issues scheduled:

September 1997	Ophthalmology - Robert Wong, MD
November 1997	Diabetes - Laurie Tom, MD
January 1998	Pain - Hob Osterlund, RN
February 1998	Pain - Hob Osterlund, RN
March 1998	Clinical Toxicology & Poison Control Ctr. John Racine, RN & Al Inaba, MD

Additional special issues in progress include:

Osteoporosis	Richard Wasnich, MD
Brain Injury	
Alternative Medicine	
Nutritional Medicine	

In this issue, be sure to read the manuscript by Hob Osterlund. It serves as an introduction to the important January & February 1998 Pain Special Issues. Many of the authors included in these issues will be presenting their reports to the Pain Task Force of the Governor's Blue Ribbon Panel on Living and Dying with Dignity.

Presidents Message

John S. Spangler MD

The American Medical Association annual meeting in Chicago was held June 20th to June 26th. If every doctor could attend this meeting, I'm certain that everyone would join because you realize that someone is helping us at many levels. The major concern of all the physicians is legislative action in Washington where the AMA has excellent staff and represents us in a manner which is impossible for the individual physician.

Major items considered were the partial birth abortions, medical service accounts national patient safety foundation, tobacco settlement and many awards presented during the meeting. Membership is stable. A major program is American Medical Accreditation program which will be presented to you over the next few months.

Our delegates represented Hawaii at all sessions and at the reference committees. Please contact any of the delegates for more details.

Remember the HMA annual meeting will be held at the Hilton Waikoloa Hotel on the Kohala coast of the Big island from October 30 to November 2.

Sign up now to attend the HMA 141st Annual Meeting!



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Commentary

The Last Days of a Hawaii Labor Leader

A.A. Smyser, contributing editor
Honolulu Star-Bulletin

Living and dying with dignity can cost a very high price in money. Often it costs more than people have readily available to them, particularly if its is in the under-insured area of long-term care.

The dilemma it poses was illustrated recently for the Governor's Blue Ribbon Panel on Living and Dying with Dignity with a frank personal report on the death two years ago of Robert McElrath, 77.

He was the colorful "voice of the ILWU" in some of its most dramatic strikes and organizing efforts in Hawaii following World War II. His evening radio shows during strike crises drew massive listenership. He disclosed things the established media missed.

In his later years, McElrath was separated from his wife, Ah Quon, also a key ILWU figure, but they remained married. She lived on St. Louis Heights. He was in an apartment near the union headquarters on Atkinson Drive.

As he developed cancer, which finally led to a brain tumor operation, she visited him daily. When he fell down she was unable to lift him. She had to call for help from the union members next door.

The two agreed he had to go to a care home. The attractive one they found in Manoa cost $3,000 a month. That was $1,300 more than his combined income from Social Security and his union pensions. He drew reduced benefits because of early retirement.

He had some checking account savings plus a $25,000 certificate of deposit. Because of his wife's assets he could not qualify for Medicaid to help pay his care-home bill. He had to spend down his assets. He calculated he would run out of funds after 18 months.

The fact that he died after only four months is partly because he worried about money, his widow believes. It also was true, she said, that his quality of life had greatly deteriorated.

He was a distant relative of Bret Harte, the novelist. He loved words and the ability to form thoughts and messages compellingly. Aside from his radio show he handled publications and public communication generally for the ILWU in its turbulent organizing years.

He and his wife were at the side of leader Jack Hall in all of this. Organization of the pineapple industry was mapped out in their home.

As McElrath's illness developed, his wife said, he recognized that his memory was poorer and his capacities were fading. Along with this fading, his once-extensive interests in reading, speaking and writing diminished.

A.Q. McElrath's personal experiences with terminal illness and several deaths, plus her long involvement in social work and advocacy for the ILWU, prompted her to form a committee to lead the successful effort to persuade Governor Cayetano to appoint the blue Ribbon Panel on Living and Dying with Dignity. She declined to serve on it but continues with her original committee to promote greater public awareness of the options with terminal illness.

Well apart from the public focus on doctor-assisted death, her work illuminates far wider areas of concern. These include the costs of dying with dignity and the care choices associated with final illness. These are not fully understood and utilized and could be improved.

Editor's Note:
A.A. "Bud" Smyser continues his excellent *Hawaii's World* columns in the *Honolulu-Star Bulletin* with this poignant report about the late Robert McElrath. Mahalo to his widow "A.Q" and to Bud for permission to reprint this in the *Journal.*

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Pain Relief as a Basic Human Right

Hob Osterlund, RN, MS, CHTP, Clinical Coordinator
Pain Management Services, The Queen's Medical Center

Pain and its relief can be viewed from a number of perspectives: clinical, personal, political. In some cases it becomes useful to recall that the etymological root of "pain" lies in "*poena*" or "punishment." Nowhere is the concept of punishment more overt than in torture and war, where human pain is used as a political expression of another individual or regime. Elaine Scarry in her book *The Body in Pain: The Making and Unmaking of the World* analyzes the similarity between war, torture and the simple act of overlooking the pain of another human being.

In each of these situations, the central act is making a person (or thousands of people) invisible . This can be done by an overt choice to destroy or damage the human body; it also can be done by a simple refusal to recognize the voice and experience of the person in pain. In any case, the essential aliveness of the person is denied. As a result, they are "unmade" rather than created, erased rather than seen. The unmaking of their pain is also the destruction of their world.

In fact, pain itself mimics death. Both happen because of the body or perhaps what is felt to be the betrayal of the body; in each, the contents of consciousness are totally altered. Each of us normally has a range of awareness that spans years, continents and countless memories. At any given moment one might be thinking about her most beautiful child, the billions of galaxies discovered by the Hubble telescope or simply what to pick up for dinner on the way home. In pain, conscious thought is diminished to this very moment in this very place. The body becomes the only object of focus, taking the place of all other experiences. No other reality is imagined or felt. Being free of the pain seems a task too impossible to wish for. The vague notion that all people die someday changes to "I'm dying" or "I hope to die." The expression "I thought I was going to die" when describing an event of severe pain is no coincidence.

Thus, pain shrinks the world of the one in pain. Intuitively,

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most people will attempt to expand their shrunken world by sharing the experience of the pain so that the attention and understanding of others will lessen the intensity of the experience. Recognizing that pain has no voice other than pre-language sounds of agony others will find hard to believe, people in pain struggle to find a mutual language. All too quickly they discover *there is life in that language.* So they work to stay alive, dramatizing the language if unheard by more subtle talk. The voice itself becomes life-giving, resuscitating the mind from the deafening and deathening sounds it cannot ignore.

The distance between the one in pain and the one witnessing the pain is often far greater than the number of feet or miles separating them. The distance is more accurately measured by the distance between their physical realities. The one in pain is profoundly sure of the presence of that pain; the witness, suspicious. Denying the possibility that one day she could feel such intense pain, the observer inadvertently denies the entire existence of the one in pain. Able to understand death only in the abstract, she may have little compassion for what appears to be an exaggerated response.

When the witness recognizes the legitimacy of another's pain, however, she also honors the person's entire existence. Aneta Catlin, doctoral candidate at Rush University, describes being a nurse in wartime Israel in 1972. Frequently caring for enemy soldiers injured in Israeli territory during terrorist action, the nurses knew the Geneva Convention required them to medically treat the enemy soldiers. According to the same Convention, she says, *they were not required to treat their pain.* This created a dilemma for some nurses. Trained in the art of caring and willing to recognize the suffering of a wartime enemy, these nurses had the opportunity to stretch the boundaries of what it is to be fully human.

Treatment of pain is a basic right, though not necessarily legally or clinically mandated. Recognition of the pain of another takes a set of skills more complex and inevitably more courageous than those of politics or medicine; it takes the awareness and acceptance of one's own mortality.

References

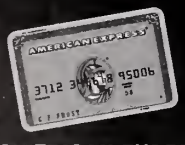
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Medical School Hotline

From Hilo to Waianae
A Community-based Clerkship

Gordon M. Greene, Ph.D.
Department of Family Practice
and Community Medicine
John A. Burns School of Medicine
1960 East - West Road
Honolulu, Hawaii 96822

Over the last several years John A. Burns has become nationally recognized for its problem-based learning curriculum. In this format, students in their first two years begin mastery of the knowledge, skills and attitudes of physicians through intense group learning centered on patient cases. A third-year student program, the 6L clerkship, was begun in 1992 to bring many of the same principles of adult learning into clerkship training. By using community settings in rural and medically-underserved areas, students from these areas or students who felt a bond with these communities can learn medicine in a place where they might eventually practice.

Since the start of the program, ten to twenty percent of each class of third-year students have participated in the 6L clerkship. Of the thirty two students who have completed the program and graduated from medical school, just over eighty percent of this group have taken their residencies in a primary care specialty.

The focus of the clerkship is on a given population of patients who use the facilities and physicians of a particular setting or organization. In that context, for six months students take clerkship training each week in medicine, surgery, psychiatry, pediatrics, OB-Gyn and family practice by working with a clinical faculty member in at least one half-day clinic in each discipline. If a patient is admitted to the hospital, the student will follow them onto the wards and participate in their care when they are discharged. If a patient crosses disciplines - for example a pregnant mother who sees an internist, an OB-Gyn and a pediatrician over the course of six months - the student will work to maintain contact across clinics. Historically, Queen Emma Clinic at Queen's Hospital was the first site of training. Recently, Hilo, Waianae Coast Comprehensive Health Center, and the Kaiser system on Oahu have been added.

For the remaining six months of clerkship training, the students participate in "turbo-blocks". Rather than learning in-patient medicine through the seven or eleven week blocks that most students follow, 6L students rotate through intense four week blocks of pediatrics, surgery, psychiatry, OB-Gyn and eight weeks of medicine. Like their fellow students who rotate through the disciplines, the 6L students take call, do extensive write-ups and sit for same end-of-block examinations. Throughout the entire year, there are weekly seminars for the students that include small group tutorials, practice in the use of evidence-based medicine, journal clubs, and workshops on doctor/ patient relationships.

How well do students who train in the 6L program compare to those who train in the traditional clerkships? While a number of measures of knowledge and skills show that 6L students fare no worse than traditional students - in terms of graduation rates or clerkship honors, for example - it is difficult to demonstrate that this is an improved method of clerkship training. Now that the format of the program has been stabilized(for the first several years there were only one or two "turbo blocks" in a few selected disciplines), a larger number of students will participate in the program and better comparisons will be made.

The most successful students in the 6L program seem to be those who have confidence in their abilities to work and study independently. Because there is sufficient time for the preceptors to gauge student abilities and to foster further development, these students gradually take on increasing loads of patient responsibility, both on the wards and in the clinic. As one of this year's students said, the best part of the experience was "the mentor relationship formed with my attendings... and the sense of being truly responsible for patient care, especially in orchestrating care between specialty clinics." This sense of responsibility and mentorship sets up a positive feedback for learning which then fosters additional confidence. For example, because of their early training in the skills of using evidence-based medicine, 6L students have intervened and altered successfully the course of patient care by a ward team and attending physician through use of appropriate literature.

Another perspective on the attributes of students who succeed in this form of training comes from members of the admissions committee for the Family Practice residency based at Wahiawa Hospital. Over the last several years this has become a sought after program, with highly competitive students applying from across the country. Each year there have been several successful John A. Burns applicants who came through the 6L program. The one consistent characteristic of these 6L students that distinguishes them from other applicants is what committee members describe as "their ownership of their patients."

While students for the most part also like the focused, in-depth, discipline-specific learning that takes place during the 4-week in-patient blocks, they can become frustrated when more traditional assessment techniques are encountered. If the block grade is determined in large part by a multiple choice exam, students feel torn between doing the patient-centered learning that their first two years of training fosters as compared with simply studying the texts to pass the examinations. The students also express frustration in managing a complex weekly schedule that includes their seven clinics, rounds on patients who may have been admitted to several hospitals, and the medical school didactic sessions.

From a faculty perspective, a major concern has been that 6L students spent a great deal of their training time without direct faculty supervision. Hospital-based clerkship training is a well-honed system that ensures that student performance is observed often and by many people. Because 6L students spend at least half their year working with a clinical faculty member who may have minimal contact with colleagues within the medical school, there is need for strong liaison between the faculty responsible for the discipline curriculum and the clinical faculty in the community. Now that the program has been modified to include 4 weeks of in-patient training in all disciplines, this faculty concern seems to have been allayed.

While the clinical faculty who participate at the four 6L training sites enjoy teaching, the organizations themselves also see the benefit of providing students with sustained exposure to their

particular approach to their patients' needs. The first cadre of 6L students are about to finish their residency training. Their selection of the types of settings where they choose to practice will be tracked.

In clinical medicine and medical education, innovations undergo a rigorous period of testing before earning a place in the curriculum. After five years, the 6L program has survived this initial testing and has become a focus for new ideas in clinical teaching. Success is attributed to the support of the communities, the medical school administration, the clinical departments and the invaluable volunteer efforts of the clinical faculty. Above all, the program is succeeding because some of the best students in the medical school have absorbed the principles of problem-based learning and are now taking ownership of their clerkship training.

Alzheimer's Association Provides Physicians with Ethics Fact Sheets

"You have Alzheimer's disease." For a patient and his family, these words can be frightening and life-altering. For a physician, these words can pose many ethical issues. "How and when should I tell my patient?" "Should I tell his family first?" "What questions are they likely to ask me?"

To help physicians and caregiving teams handle these and other difficult ethical questions they may face when caring for individuals with Alzheimer's disease, the Alzheimer's Association has created a helpful fact sheet series called "Ethical Considerations." These materials have been adapted from a research study conducted by Stephen Post, PhD and Peter Whitehouse, MD, PhD, both of Case Western Reserve University in Cleveland.

The Alzheimer's Association is the only national voluntary health organization dedicated to research, and to providing support and assistance to people with Alzheimer's disease, their families and caregivers. Founded in 1980, the Association works through a network of more than 200 chapters across the country. The Association's most recognized educational program is its National Alzheimer's Disease Education Conference, which is expected to draw more than 1,500 Alzheimer health care professionals to Chicago in July.

The first two fact sheets in the series, "Issues in Diagnostic Disclosure" and "Issues in Death and Dying" are now available to physicians and other health care professionals by calling 1(800) 272-3900 or the Hawaii Alzheimer's Association Chapter at 591-2771.

I Can do That

by Robert Flowers MD

Whenever you shrink from a task never think
The assignment asks more than you've got—
Just stand on your toes, take a breath, snort your nose
And give it your very best shot!
Just whisper this mantra that's absolute "contra"
To Forces that freeze where you're at—
A short phrase that hurls us to undreamt of worlds
*It's simple—say, **"I can do that!"***

We all start out small among people so tall
A lot like a small little shrimp
But unless self esteem is totally redeemed
We'll walk through this life with a limp.

God who is gracious said, "Just be audacious."
"You're children I love and begat—"
"I planted the seed—you have what you need"
"Four words—just say, "I can do that!"

A thread pure as gold holds us all, I am told,
We're brothers and sisters in spirit
And yet there's another, dear sister and brother,
That four worded phrase—can you hear it?

"I can do that," said the rookie at bat
Having just watched the slugger, Babe Ruth.
He stretched his bat back, then we heard the loud CRACK
Lou Gehrig turned fancy to truth.

A young island vessel once watched "Sumo's" wrestle
And saw giants thrown from the ring.
Chad ate all his rice and mumbled it twice—
His "I can do that," made him king.

And I in my task to correct often ask,
"Can I make this deformed part look good?"
Then I search deep iinside me for the source that can guide me
And a "yes!" lets me know that I could!

With these words here before you, and humbly implore you
Adventure—and never stand pat.
Embrace what God gave you—
Five words that can "save" you—
"Audacity" and "I can do that!"

Whenever you shrink from a task never think
The assignment asks more than you've got—
Just stand on your toes, take a breath, snort your nose
And give it your very best shot!
Just whisper this mantra that's absolute "contra"
To Forces that freeze where you're at—
A short phrase that lifts us, empowers and gifts us
*Let's say it now, **"I can do that!"***

Efficacy of Advance Directives in a General Hospital

Lawrence L. Heintz, PhD, Professor of Philosophy, University of Hawaii at Hilo
Consulting Medical Ethicist for the State Department of Health

Summary

A review of medical charts of all deaths for one year at a general acute care hospital reveals that 135/602 (22%) charts indicate that the patient had an advance directive. In 68/135 (50%) of the cases, the patients were unable to participate in decisions and met the conditions of the advance directive. In 33/68 (49%) of those cases the records indicate that the advance directive influenced care. In 63 of the 135 charts the advance directive was present and chart notations indicate an additional 25 advance directives were located at the physician's office. Eighteen of a total of 44 physicians listed as attending accounted for the 33 cases in which the record indicates that the advance directive was recognized. Twelve of these 135 patients were coded during their hospitalization. Three of the 12 were coded in the ER upon admission, the remaining 9 were coded in the course of their care in the acute care hospital. Regarding code status a three tiered (Cat I, II, III) classification system was in place. Initial classification of the 135 patients upon admission was: 64 "full code" (I), 56 were "all but CPR" (II), 15 were "No code" (III). Code classification at the time of death (or discharge) was: I =45, II=53, III=36.

Objective.—To investigate the extent to which advance directives influence clinical care of patients during the final acute hospitalizations.

Design.—Retrospective chart review.

Setting.—General Hospital of 274 beds.

Patients.—602 death charts reviewed, 135 contained indications or the execution of an advance directive.

Main Outcome Measures.—The 1995 medical records of 602 deaths were reviewed for evidence of influence of advance directives in clinical care.

Results.—24% of patients who had advance directives in the chart or at the physicians office had their directives recognized during their final hospitalization. In 68/135 (50%) of the cases the conditions to activate the advance directive were met. And in 33/68 (49%) of those cases the advanced directive was invoked. There was some, but less than expected correlation between advanced directives and DNR orders. In a three tiered Code Category Classification system (Cat. I, full code, Cat. II Chemical Code, Cat. III, No Code.) the initial classifications in the 135 cases with evidence of advance directives were Cat. I 47%, Cat. II 42%, and Cat. III 11%. Compared to 59 cases where there was no indication of an advance directive the classifications were Cat. I 67%, Cat. II 26% and Cat. III 7 %. However, the classifications in the two groups at the time of death of the patients were Cat. I 34% & 31%, Cat. II 39% & 39% and Cat. III 27% & 30%. There was a 20% increased incidence of an initial classification of full code in the cases without indication of an advance directive. But once the patient care involved review of code status, the final classifications of patients were the same irrespective of the presence of an advance directive.

Conclusions.—In 50% or 68/135 of the cases the patient met the conditions for invocation of the advance directive and in 33 or 49% of those cases the advance directive was invoked. Another way to state the impact of advance directives in the population studied is that in 22% of the 602 deaths there was indication of an advance directive and in 50% of those cases the directive became relevant and in 49% of those cases it had a bearing on the care (or in 5% of the 602 deaths studied). More research is needed to determine why advance directives are not utilized more and why they to do not have greater effect on clinical care decisions in terminal patients. But problems with making them available to relevant parties, hospital record keeping, and physician recognition of their significance are evident.

Introduction

Our society affirms the right of self-determination in health care decisions. Competent patients can extend their right to when they have lost decisional capacity through the use of advance directives (i.e., livings wills or L.W. durable powers of attorney for health care or DPA). In 1991 a nationwide Gallup poll reported that 75% of Americans approved of living wills and by 1994 all states and the District of Columbia had legislation recognizing some type of advance directive. Advance directives have been identified and promoted as instruments which can best ensure that one's wishes regarding medical treatment will be followed after one has lost decisional capacity.[1-5] They have gained favor because they promote self-determination, are a guard against unwanted and often futile medical interventions that only prolong the dying process, and they relieve anxiety about loss of control and the burdens that fall on others during a final hospitalization. This study suggests that despite legislation which give advance directives standing as a legal means for patients to provide health care decision makers with an expression of their wishes, their performative force is recognized much less than thought. [1-5, 9]

While advance directives have been promoted as the patient's best instrument to ensure congruence between their wishes and the aggressiveness of care at the end of the patient's life, recently there have been indications that they are not as efficacious as thought.[6-8] This study explores the efficacy of advance directives in a general

acute care hospital in 1995. In 1990 the Patient Self-determination Act was implemented with the intent to identify patients entering acute or long term care facilities who had executed an advance directive and to encourage competent adults who had not to do so.[13] The completion of an advance directive is only the first step, which by itself will do little to ensure that a patient's wishes will have a bearing on clinical practice. Advance directives are a form of communication, and as such, they can fail in innumerable ways. They not only must be executed, placed in the hands of the relevant parties in order to be recognized, honored and have an affect on clinical practice, but also, the conditions which they describe must obtain in order for them to be invoked. Our study indicates that in only 5% of the patients who died in 1995 at the hospital studied had an advance directive which affected their care.

Table 1.—Documentation of previously executed advance directive in hospital charts of 135 cases where some indicator was positive*

	Yes	NO
AD present in chart	63	72
Florescent Orange Sticker	45	90
Cover Sheet	22	113
Admitting Form Ad-1 **	82	14

Present in chart	With Family	in MD Office
10	25	25

*Most cases had multiple indicators of the previous execution of an advance directive.
**Some of the intake sheets indicated the presence of an advanced directive in the chart, but it was not present.

Methods

The medical charts of all patients who died in 1995 from a 274 bed general acute care hospital were reviewed for indication of a previously executed advance directive. The author reviewed a total of 602 death charts. The charts were reviewed to determine whether there was any indication of a previously executed advance directive. If no indication of an advance directive was found in the most recent admission, the previous admissions up to one year were reviewed for any indications of an advance directive. Indications of an advance directive were found in 135 charts. Those charts were reviewed further for demographic data, diagnosis upon admission, type of admission, length of stay, cause of death, whether Coded, Code Category, presence of advance directive(s), type of advance directive(s), any notation about the advance directive (i.e., nurse, physician, social worker), any notation indicating the patient's capacity to make decisions, physician(s), and number and type of consultations. A member of the medical records department also reviewed 28/135 charts to check for accuracy and verify the data collected. *(Tana Basa, R.N., Medical Records Clerk)*

The criteria used to determine whether and to what extent advance directives influenced the course of care included: 1) chart progress notes documenting discussions between designated proxies and physicians regarding treatment, 2) chart progress notes and consent forms documenting consent by designated proxies for tests and procedures, 3) chart notes regarding discussion of "Code status" (DNR) with designated proxies , 4) chart notes regarding decisions to withhold or withdraw care, 5) any reference in the chart to an advance directive, including remarks by consultants, social workers, nurses notes, etc.. 6) certification that the patient's condition met the conditions described in the advance directive (as required by the law). The meeting of any one of these was considered evidence that the advanced directive influenced treatment decisions.

Demographic data was obtained from the charts regarding patient age, gender, marital status, ethnicity, and type of advance directive (living will or durable power of attorney). The patient's admitting diagnosis, diagnoses at death, type of admission (emergency or elective), length of stay, code category classification, performance of cardiopulmonary resuscitation, and number of physicians involved in the case (consultants) was also obtained.

Results

Of the 602 death charts for 1995 there was indication that an advance directive (AD) was executed in 135 cases. Indication that the patient had an advance directive was found in a variety of places in the chart and in most cases there were multiple indications. Every possible combination of the following indicators was found: 1) two entries on the cover (face) sheet which indicates yes/no whether the patient has a durable powers of attorney (DPA) and whether the patient has a living will (LW), 2) the admission or intake sheet (Ad-1) addresses whether the patient has an advance directive, if yes, what type, and it asks for the location, 3) the chart cover may have had a florescent orange sticker, in a few cases the cover sheet had a sticker, 4) the advance directive was in the file. See Table #1.

The most common situation was the intake sheet would say "yes" and the advance directive was in the chart. Second most common, only the intake sheet would say "yes" and no other indication of an advance directive was found. As I indicated every possible combination of circumstances was found except one (no case where the only indication of an advance directive was an orange sticker). Several charts were found with an orange sticker but no advance directive. One conclusion to draw from such disparate empirical data is that unless one was searching for an indication of the execution of an advance directive it could easily be overlooked. This is because the cover sheet, the most evident document, was the least reliable indicator. It indicated an advance directive in only 13% of the cases that had other indications of the execution of an advance directive. The intake sheet, on the other hand was reliable 61% of the time, but this form is buried deep in the chart, has little relevance to patient care, and is rarely looked at. The orange sticker was found on 43 of the 63 charts where an advance directive was present and on 4 in which there was no advance directive. The advance directive was present in 63 charts but it was not displayed in the appropriate place (prominently on the top left side) in 14 of those records (22%). It should also be noted that 6 general powers of attorney were mistakenly identified in the record as advance directives for health care decisions.

Interviews were conducted with hospital staff from Medical Records, Admission Intake interviewers, and nursing supervisors in order to understand the generation, development deployment and utilization of medical charts (how they are compiled, arranged, managed, and provide for the trained eye - case histories) . The charts in the medical records archives are what is left of the "hard empirical record" and one sees very quickly the need for caution (or

Table 2.—Characteristics of 135 patients who had previously executed an advance directive

	Number	Percent
Gender		
Male	77	57%
Female	59	43%
Ethnicity		
Caucasian	47	35%
Japanese-American	60	44%
Filipino	7	5%
Hawaiian	2	1%
Portuguese	9	7%
Undetermined	11	26%
Age (years)		
60 <	8	6%
60 -74	49	35%
75 - 84	44	33%
85	35	26%
unknown	1	
Type of Advance Directive		
Living Will only	80	60%
Durable Power of Attorney only	16	12%
Both LW and DPA	37	27%
Other*		

*These were cases of Jehovah's Witnesses' Medical Directive

Table 3.—Clinical Information about 135 patients with documentation of prior execution of an advance directive

Type of Admission	Emergency 9		Elective/Acute 126	
Diagnosis	At Admission		Cause of Death	
Cardiopulmonary disease	44	33%	40	30%
Respiratory disease	21	16%	16	12%
Digestive system disease	15	11%	9	6%
Malignant neoplasm (Cancer)	46	34%	27	20%
Renal disease	32	24%	20	15%
Sepsis, infection, pneumonia	25	19%	20	15%
Stroke, Brain Bleed, Coma	27	20%	18	13%
Diabetic Complications	15	11%	7	5%
Did not die in hospital (Other)	na		35	26%
Length of Stay				
0 - 7	63			
8 - 14	26			
15 - 30	23			
30	8			
Other*	15			
Cardiopulmonary resuscitation performed	Yes		No	
	12		123	
Number of physicians and consultants involved (data from 64 cases)				
1 - 2	33	51%		
3 - 4	15	24%		
> 4	16	25%		
Code Category	First classification		Classification at time of death	
Category I	64	47%	45	34%
Category II	56	42%	53	39%
Category III	14	11%	36	27%
Patient Died	at home		in hospital	
	35		100	

* cases where death was 30+ days after discharge and/or date of death cannot be determined from the chart.

at least reserve) in the inferences we make based only on the records.

Demographic data regarding the patient age, gender, ethnicity, and type of advance directive in those cases where the chart indicated that the patient had a directive is found on Table 2. The average age of the patients with indication of an advance directive was 77 years (range, 38 to 102). 57% of the patients with advance directives were male and 79% were either Japanese-Americans or Caucasians. The living will was most common form of advance directive (present in 60% of the cases). Whereas 12% had a durable power of attorney for health care only, and 27% had executed both a living will and a durable power of attorney.

Much of the information found on Table 3 gives an indication of the seriousness of the patient's health problems. The diagnosis of patients at admission and the cause of death were invariably multiple. Most patients had three or more problems and retrospectively we know 115/135 (85%) died during or within 30 days of their last hospitalization. Hospitalizations lasting two weeks or less constituted 67% of the cases with nearly 50% of patients dying within one week.

The code classification of these patients is of interest given that they all have indications of execution of advance directives and have serious multiple system disease. Briefly, the classification system can be identified as follows: category I = "full code", category II = "chemical code" or all but CPR, category III = "no code". If the physician does not place a patient in a category, the patient is a category I by default. In 47% of the cases patients were initially "full code" by default while at the time of death 34% remained "full code". In these cases where the patient remained full code, it was not possible from the record to determine whether the code status was ever addressed by the physician. The majority of classification changes from category I to category II or III took place within a day of the patient's death. At the time of death 73% of these patients would, according to hospital policy, have had a "code" called if the classifications were adhered to and they had arrested in the presence of hospital staff . This information raises questions about the timeliness of addressing code classification in these cases of patients with advance directives. When compared to a group of 59 cases where there was no evidence of an advance directive there was a significant difference in the initial classification of category I 67%, but the classifications at the time of death were virtually the same as the group with advance directives.

Twelve of the 135 were coded, 3 in the ER and the other 9 during their hospitalization. In three of the 9 cases where the patient was coded during their hospitalization the advance directive was present in the chart and in two of those cases the patient was coded more than once.

Table 4 reveals that there was a 20% decrease in the incidence of an initial full code classification in the cases with an indication of the execution of an advance directive. If the directive was present in the record the decrease was 27% and in those cases where the advance directive was invoked the decrease in initial full code classification was 55%. As seen in this data there is a relationship between advance directives and the initial code classification. The more evident the advance directive is the less likely that the patient will have a initial code classification of "full code". However, when one looks at code status at the time of death (Table 5) there is no significant difference in the classifications in any of the groups except for the 33 cases where the physicians has explicitly invoked

Table 4.—Initial code classification in five different groups of cases.

Code category	59 cases with no indication of AD at all	135 cases with indication of AD	53 cases with indication of AD but not present	83 cases with AD present	33 cases where the AD was invoked
Category I "full code"	67%	47%	58%	40%	12%
Category II "chemical code"	26%	42%	36%	46%	67%
Category III "no code"	7%	11%	6%	14%	21%

Table 5.—Code classification at death in five different groups of cases.

Code category	59 cases with no indication of AD at all	135 cases with indication of AD	53 cases with indication of AD but not present	83 cases with AD present	33 cases where the AD was invoked
Category I "full code"	31%	34%	39%	31%	3%
Category II "chemical code"	39%	39%	37%	40%	55%
Category III "no code"	30%	27%	24%	29%	42%

the advanced directive.

Based on the information in the charts, 67/135 patients who had previously executed an advance directive never reached a condition where their advance directive could be invoked. These patients were either competent, did not die in the hospital, or died in the ER and thereby the initial conditions of the advance directive were not met and hence it was proper that it was not invoked. In the remaining 68 cases these patients reached a point during their care where they did not have decisional capacity and met the conditions of their advance directives. In 33/68 or 48% of cases where the patient could not participate in health care decisions, the record indicated that the advance directives were recognized and influenced care. In 35/68 (52%) of these cases there was no indication that the advance directive was recognized. The records in these cases document consent of family members for invasive diagnostic or therapeutic procedures, code classification, family conferences regarding care plans, and withholding or withdrawal of medical care. In all these cases decision making was not by the patient's officially appointed proxy and/or did not refer to the living will despite the fact that the conditions of which the advanced directive presumably had been fulfilled. These cases included aggressive care which was not in accord with the advance directives including (CPR, tube feeding, surgery, etc.). In the 33/68 (48%) of the cases without decisional capacity the charts contained documentation recognizing the advance directives, appointed proxies were referred to in notes, and references were made to family conferences. However, of note is that fact that in none of these 33 cases did the chart contain the legislatively required certification by two physicians that the patient's condition met the activating conditions of the advance directive.

Commentary

This study raises serious questions about the efficacy of advance directives as a way to influence clinical care. Even when patients lose decisional capacity there remains the following problems: will the advance directive be in the chart? If so, will it be in the correct place, or recognized for what it is? If acknowledged will the conditions described match the patient's condition? Will doctors take the advance directive seriously even if all conditions are met? Or will they instead be concerned primarily with the views and wishes of family members? In discussions with physicians about this study we find that most take the views of the family members to be more relevant than advance directives. The behavior of most physicians involved in the study suggests that they are unlikely to consider the relevance of the advance directive unless they are asked to by family members. Despite their legal standing it is the rare physician in this study who will follow an advance directive if it is not in accord with the view of family members. Ethically and legally such a position is indefensible, however pragmatically the lesson is that those who want there advance directive to direct clinical care must take pains to obtain family and physician support of their directives.

Even if the many problems concerning availability and accuracy of advance directives in patient records were overcome and physicians took a more supportive view about advance directives, in 50% of the cases the advance directive would not have a bearing on clinical decisions. So then, when we realize that only 24% of this population had evidence of advance directives and only half of them would under optimum conditions have had a bearing on care, claims for the value of advance directives seem over stated.

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Editor's Note:

In this, the 150th year of the American Medical Association, physicians are filled with many moral & ethical issues—more than ever. The "Commitment to My Patients" deals with some of these issues. It is available to Hawaii Medical Association members from the AMA. If you do not have it, call the AMA office for a copy. Frame it and post it in your office.

Emergency Department versus Office Setting and Physician/Patient Kinship Effects in the Diagnostic and Therapeutic Choices of Febrile Children at Risk For Occult Bacteremia

Loren G. Yamamoto MD, MPH and Rodney B. Boychuk MD
Emergency Services, Kapiolani Medical Center for Women and Children
Department of Pediatrics, University of Hawaii John A. Burns School of Medicine

Background: Given the controversy of selecting a diagnostic and treatment approach for the febrile child at risk for occult bacteremia, the purpose of this study is to survey the diagnostic and treatment strategies chosen by pediatricians for a febrile child at risk for occult bacteremia seen in three different settings (private office, emergency department, their own child) to see if any differences exist.

Study Design: Survey of pediatricians given a case scenario of a febrile female child without a source of the fever presenting in three different clinical settings: 1) Office. 2) Emergency Department (E.D.). 3) Pediatrician's daughter.

Results: 138 pediatrician surveys were tabulated. Pediatricians ordered the most tests and empiric antibiotic treatments in the E.D., the fewest tests and empiric antibiotic treatments on their daughter, and intermediate frequency of tests and empiric antibiotic treatments in the office. Roughly half the pediatricians ordered the same level of tests in all three clinical settings, while the other half varied their test ordering in the different clinical settings.

Conclusion: The clinical setting has an effect on the diagnostic and treatment strategies chosen when evaluating a febrile child at risk for occult bacteremia with patients seen in the E.D. receiving more laboratory tests and antibiotic treatment compared to office patients. Kinship also has an effect, with a child (daughter in this instance) of a pediatrician receiving the fewest laboratory tests and antibiotic treatment.

Address for reprints / correspondence:
Loren G. Yamamoto, MD, MPH, MBA
Department of Pediatrics
1319 Punahou Street, #718
Honolulu, HI 96826
phone (808)973-8387
fax (808)949-4232
E-mail: loreny@hawaii.edu

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Introduction

The evaluation of young febrile children (3 months to 3 years of age) at risk for bacteremia is a recognized controversy.[1,2,3,4,5] Actual patient data supporting a single standardized diagnostic evaluation and treatment approach is lacking. Most of the controversy stems from a subjective sense of risk tolerance.

Risk averse strategies recommend blood cultures and parenteral antibiotics for most or all children at risk for occult bacteremia.[1,2] Observation alone is recommended when prudent risk is accepted.[3] Other strategies employ white blood counts to assist in the decision to administer antibiotics.[4,5,6,7] If antibiotics are to be administered, the decision of parenteral or oral antibiotics must be made on similar risk tolerance criteria.[6,7,8,9,10]

Baraff, et al, have published practice guidelines for the evaluation and treatment of children at risk for occult bacteremia regardless of the practice setting.[4,5] However, published surveys of pediatricians demonstrate that there is substantial diversity in the management of these children and many pediatricians do not follow the recommendations of the published guidelines.[11,12] In a focus group survey of parents given the choice of blood culture+empiric antibiotics versus fingerstick WBC (then blood culture+empiric antibiotics only if WBC elevated), most parents chose the WBC strategy[13] (more risky). Furthermore, while physicians may assume that patients generally want more tests and more treatment in order to avoid as much risk as possible, a published survey of parents showed that parents often preferred the opposite of this (fewer tests, less treatment, more risk) in a hypothetical case scenario involving a 6-week old febrile infant.[13]

Given this lack of uniformity, the purpose of this study is to survey the diagnostic and treatment strategies chosen by pediatricians, for a child at risk for occult bacteremia in three different settings (private office, emergency department, their own child). The hypothesis of this study is that patients in the E.D. receive more aggressive testing and treatment compared to other patients, regardless of whether the physician is a general pediatrician, emergency pediatrician, or other pediatric subspecialist.

Methods

Pediatricians* from a single county were approached (convenience sample of the pediatric medical staff of the only children's

*military physicians and Kaiser physicians were excluded.

hospital in the county) and asked to voluntarily participate in a survey by completing a four page form. Some pediatricians were surveyed by mail. The first page of this form is shown in appendix A. The survey narrative describes a 14 month old female presenting at 3:00 p.m. with a fever (temperature 39.4 degrees) for eight hours without a source who is active, alert, not toxic, and not irritable, without a focus of infection. Pediatricians were asked to select from among several diagnostic, antipyretic, and antibiotic alternatives. Diagnostic choices included combinations of: observation, CBC (complete blood count), BC (blood culture), BC only if WBC (white blood count) elevated, and urine studies. Erythrocyte sedimentation rate, chest x-ray, and lumbar puncture were not included in the choices. Antibiotic treatment choices included: no antibiotics, empiric antibiotics, and empiric antibiotics only if the WBC is elevated. Pediatricians were also given the option of referring to an emergency department or hospital inpatient unit.

The same child with the same clinical history and examination findings was presented in three clinical settings. The first case setting is an office visit on a Tuesday (a typical office day). Pediatricians were informed that this was one of their private patients whose patient profile was that of their practice's average patient with their practice's average parents. The second case setting is an emergency department visit on a Saturday (one of highest ED census days). Pediatricians were informed that they were the emergency physician on duty in the emergency department and this is a patient that they are meeting for the first time (i.e., not one of their private patients). They were to assume that from their limited contact with this family in the E.D., this E.D. patient's profile is similar to their practice's average patient with their practice's average parents. The third case is their own daughter. Surveyed pediatricians were not allowed to call another pediatrician for advice since the purpose of this survey was to survey THEIR opinion and not the opinion of someone else.

The office visit scenario and the E.D. visit scenario differed in the day of the week because this is the most likely scenario. Office patients generally present during standard office hours, while E.D. patients most often present during non-office hours.

The fourth page of the survey consisted of demographic information profiling the pediatrician. Physicians were NOT informed of the purpose of the survey until after they had completed it.

During the study period, most of the pediatricians were surveyed in the hospital in person. For those who were not surveyed in person during this period, the surveys were mailed to them and voluntarily completed and returned.

Data were keyed into a computerized data base program and analyzed using crosstabulation (frequencies and Chi-square) statistics. A probability value of less than 0.05 was used to determine statistical significance.

Since no patients were involved in this survey, institutional review board approval was not sought.

Results

Table 1 tabulates the survey responses in the three different clinical settings (E.D., office, and daughter). Laboratory tests (68%, 32%, 22%) and antibiotics (51%, 20%, 15%) were ordered the most frequently in the E.D., intermediate frequency in the office, and the least frequently on the daughter, respectively ($p<0.001$). Antipyretic treatment did not differ significantly among the three clinical settings. In instances when antibiotics were ordered, parenteral antibiotics were most likely to be ordered in the E.D. setting compared to the office and daughter settings (82%, 56%, 57%, respectively) ($p<0.02$).

Table 2 categorizes the responses in table 1 and stratifies these frequencies among the three different clinical settings by several pediatrician profile variables.

Residents included first, second, and third year pediatric resi-

Table 1.—Pediatrician diagnostic and treatment strategy options selections in three different settings

	E.D.	Office	Daughter
Diagnostic options (may choose more than one):			
Home Observation	138 (100%)	138 (100%)	137 (99%)
Administer acetaminophen and reassess	61 (44%)	46 (33%)	59 (43%)
CBC	86 (62%)	33 (24%)	23 (17%)
Blood culture	55 (40%)	16 (12%)	14 (10%)
Blood culture only if WBC elevated	23 (17%)	8 (6%)	6 (4%)
Bag urine specimen studies	18 (13%)	17 (12%)	12 (9%)
Catheterized urine specimen studies	44 (32%)	14 (10%)	6 (4%)
Refer to E.D. for further evaluation	0	0	1 (1%)
Admit to hospital inpatient unit	0	0	0
Antibiotic strategy option (choose one only):			
No antibiotics	68 (49%)	111 (80%)	117 (85%)
Antibiotics if WBC > 15,000	41 (30%)	15 (11%)	13 (9%)
Antibiotics if WBC > 20,000	22 (16%)	9 (7%)	4 (3%)
Antibiotics regardless of WBC result	6 (4%)	2 (1%)	3 (2%)
Other ("depends on differential")	1 (1%)	1 (1%)	1 (1%)
Antibiotic selection option (choose one only):			
Oral antibiotics (any one)	12 (17%*)	12 (44%*)	9 (43%*)
IM ceftriaxone plus oral antibiotics (any one)	57 (81%*)	14 (52%*)	11 (52%*)
Daily IM ceftriaxone for at least 3 days.	1 (1%*)	1 (4%*)	1 (5%*)

*percentage uses denominator excluding "no antibiotics" strategy

Table 2.—Pediatrician diagnostic treatment choices in three different settings (row percentages)

	ED				Office			Daughter		
	Total (n)	No Tests (%)	Urine only (%)	Blood ± UR (%)	No Tests (%)	Urine only (%)	Blood ± UR (%)	No Tests (%)	Urine only (%)	Blood ± UR (%)
All	138	32	42	25	68	16	16	78	9	12
Survey group										
Pediatricians	111	33	41	25	73	13	14	81	9	10
Residents	27	30	48	22	48	33	19	67	11	18
Board certification										
Not board certified	35	26	51	23	54	29	17	71	11	15
Board certified pediatrics	103	35	39	26	73	12	16	81	9	11
Board certified subspec.	18	33	6	61	67	22	11	78	11	11
Medicaid percentage of practice										
< 10%	31	35	42	23	74	16	10	84	10	6
10% to 25%	33	30	42	28	73	12	15	79	12	9
26% to 50%	15	27	40	33	60	13	27	67	20	13
> 50%	48	31	46	23	65	19	16	79	6	14
Not applicable	11	45	27	27	64	18	18	89	0	11
Pediatrician's age										
< 32	24	25	54	13	58	29	12	71	8	17
32 - 39	39	41	41	18	67	15	18	80	10	10
40 - 49	34	24	47	29	68	15	18	77	12	12
≥ 50	40	38	30	33	75	10	13	83	8	10

Table 3.—Diagnostic strategy options ranking by pediatrician characteristics (row percentages)

	ED=Ofc=Dtr	ED>Ofc>Dt	ED=Ofc>Dtr	Other
All	65 (47%)	55 (40%)	14 (10%)	4 (3%)
Board certification				
Not board certified	14 (40%)	12 (34%)	7 (20%)	2 (6%)
Board certified pediatrics	51 (50%)	43 (42%)	7 (7%)	2 (2%)
Board certified subspec.	10 (55%)	6 (33%)	2 (11%)	0
Medicaid percentage of practice				
<10%	15 (48%)	13 (42%)	2 (6%)	1 (3%)
10% to 25%	16 (48%)	15 (45%)	2 (6%)	0
26% to 50%	6 (40%)	6 (40%)	1 (7%)	2 (13%)
>50%	20 (42%)	19 (40%)	8 (17%)	1 (2%)
Not applicable	8 (73%)	2 (18%)	1 (9%)	0

Table 4.—Pediatrician diagnostic treatment choices in three different settings (row percentages)

	ED				Office			Daughter		
	Total (n)	No ABX (%)	Hi WBC ABX (%)	ABX in All (%)	No ABX (%)	Hi WBC ABX (%)	ABX in All (%)	No ABX (%)	Hi WBC ABX (%)	ABX in All (%)
All	138	49	46	4	80	18	2	85	13	2
Board certification										
Not board certified	35	40	54	6	63	34	3	74	23	3
Board certified pediatrics	103	52	44	4	86	33	1	88	9	2
Board certified subspec.	18	61	33	6	67	11	22	78	17	6
Medicaid percentage of practice										
< 10%	31	52	45	3	81	16	3	81	16	3
10% to 25%	33	55	39	6	85	15	0	85	12	3
26% to 50%	15	40	53	7	67	33	0	80	20	0
> 50	48	46	50	4	79	19	2	88	11	2
Not applicable	11	73	27	0	91	9	0	91	9	0

dents, combined medicine/pediatrics residents, and a fourth year chief pediatric resident. Most of those who were not board certified in pediatrics were pediatric housestaff or young physicians who were board eligible in pediatrics but who had not yet taken the board exam or had taken the board exam, but were awaiting notification of their results.

Table 2 shows a greater frequency of laboratory testing in the E.D. setting and the least testing on the daughter; however these frequencies did not differ significantly by pediatrician profile characteristics (board certification, medicaid percentage of practice, practice type, pediatrician's age [one pediatrician did not give an age], sex, and family profile).

Table 3 categorizes the diagnostic choices and rank orders them among the three different settings; emergency department (ED), office (Ofc), and daughter (Dtr). The rank order categories included are: ED=Ofc=Dtr (the diagnostic options selected by the pediatrician are the same for all three office settings), ED>Ofc>Dtr (ED has more tests than the office which has more than or the same tests as the daughter), ED=Ofc>Dtr (options selected are the same for office and ED which have more tests than the daughter), Other (any other rank order). To determine this rank order, we simplified the rank from lowest to highest as: no tests, urine studies only, blood studies only, urine and blood studies.

Roughly half of the pediatricians selected the same diagnostic strategy regardless of clinical setting, while the other half varied their diagnostic strategy in the different clinical settings, more often ordering the most tests in the E.D. setting. The distribution of groups diagnostic strategy ranking did not differ significantly when stratifying the pediatricians by survey group, practice type, board certification, medicaid percentage of practice, age, sex, or family profile.

Table 4 takes the antibiotic strategy choices in table 1 and categorizes them into: 1) no antibiotics, 2) antibiotics only if WBC high, 3) antibiotics regardless of WBC (all patients). One pediatrician wrote in an antibiotic choice to administer antibiotics depending on the differential. This choice was included in the "antibiotics only if WBC high" category. Table 4 stratifies these frequencies among the three different clinical settings by several pediatrician profile variables.

Stratification of the office setting antibiotic treatment choices by board certification groups showed a significant difference ($p<0.01$) with non-board certified pediatricians (mostly residents) more likely to choose antibiotics compared to board certified pediatricians. For the E.D. and daughter settings, the board certification

Table 5.—Some recent recommendations in the literature for children at risk of bacteremia.

Baraff, et al (1993, expert panel practice guidelines)[4,5]
CBC if temperature >39 C. If WBC > 15,000, obtain a blood culture and treat with ceftriaxone.Obtain urine cultures in all males under 6 months and all females under 2 years who are treated with antibiotics. Alternate option is to obtain a blood culture and treat all children with temperature >39 C with empiric antibiotics.

Baraff (1993, review article)[22]
Same recommendations as above.

Baraff, et al (1992, management guidelines)[23]
Blood culture and empiric antibiotics. CBC is not recommended.

Bass et al (1993, 519 patients)[6]
WBC > 15,000 and fever >39.5 C identify children at high risk and should be treated with antibiotics (amoxicillin/clavulinate or ceftriaxone). Routine treatment of others does not appear to be indicated.

Downs, et al (1991, decision analysis)[1]
Blood culture and empiric antibiotics for all those at risk (2-24 months and rectal temperature >39 C).

Fleisher, et al (1994, 6680 patients)[10]
If empiric antibiotics are to be given, ceftriaxone provides a safe and effective alternative (better outcome profile compared to amoxicillin, however, not statistically significant).

Jaffe (1994, review article)[7]
CBC. Blood culture and empiric antibiotics if WBC > 10,000 or WBC > 15,000.

Kramer, et al (1989, decision analysis)[24]
No blood culture strategy has the greatest utility.

Lieu, et al (1991, decision analysis)[2]
Blood culture and empiric antibiotics.

Long (1994, editor's column)[3]
No tests, no antibiotics as the preferred choice.

Singer (1995, review article)[25]
3-6 months: Urinalysis. Parenteral ceftriaxone is not cost effective. No blood work unless temperature exceeds 41 C.
6-24 months: CBC and blood cultures if temperature >40 C. Treat with parenteral antibiotics if WBC > 15,000.

groups were not significantly different. The distribution of antibiotic treatment choices in each clinical setting did not differ significantly between survey groups, practice setting, medicaid percentage of practice, pediatrician's age, sex, and family profile.

Antibiotic strategies were rank ordered (using the antibiotic strategy categories in table 4) among the three different settings similar to the tabulation in table 3. Roughly 60% of the pediatricians selected the same antibiotic treatment strategy regardless of clinical setting, while the other 40% varied their antibiotic treatment strategy in the different clinical settings, most often using antibiotics in the E.D. setting. This distribution of antibiotic treatment strategy ranking did not differ significantly when stratifying the pediatricians by survey group, practice setting, board certification, medicaid percentage of practice, age, sex, or family profile.

Note that the absence of statistical significance may be due to type II error (inadequate sample size) or a true absence of a difference. The sample size here is not large enough for some of the attempted stratifications.

Discussion

Survey participants were specifically informed that this was merely a preference survey and not a test or exam of any type. However, it was evident that some survey participants took this as a "test" since they went back to change responses on page one after completing page two and/or page three. There was no effort to change this behavior once the survey was started with the participant. This "Hawthorne effect", which describes a phenomenon where the behavior of study participants (pediatricians in this study) changes when they are aware that they are part of a study[14], applies to this study since surveyed pediatricians were aware that this was a study survey. The interpretation of this data should take this into consideration. Since half the pediatricians chose the same clinical approach in all three settings, while the other half varied their approach, the direction and magnitude of bias due to the Hawthorne effect cannot be determined under the limited conditions of this survey. In actuality, conclusions from this survey are based on what the pediatricians reported they would do. It would be nearly impossible to carry out such a study to see what they actually do in practice since only a few office pediatricians routinely staff emergency departments and the diversity of patients presenting in the different settings would be difficult to control. Several previous studies in related subject areas have relied on survey data.[11-13]

Sampling of study subjects (pediatricians) was that of a convenience sample. The authors knew nearly all the civillian practicing pediatricians in the entire county. Those who were encountered during medical activities (meetings, patient care activities, etc.) were surveyed in person (100% participation of those interviewed in person). For those pediatricians who were not encountered in person during the study period, the surveys were mailed to them. Of the 48 who were mailed surveys, 27 (56%) returned them. While this sampling is not necessarily random, it is a convenience sample which encompasses a high percentage of the target group (87%) of 159 pediatricians targeted in the county. Only the mailed surveys were subject to participation bias (20%, 27 of 138). Statistics comparing the mailed survey group versus the others showed no significant difference between these two groups.

While practice guidelines have recommended routine blood culture or WBC testing for febrile children at risk for occult bacteremia, they allow for individulizing therapy based on clinical circumstances or variation of these guidelines based on a different interpretation of the evidence.[4,5] Most of the reports studying febrile children have been done in emergency department or large hospital based clinic cohorts, both of which lack the degree of continuity found in a private office. The conclusions and recommendations from studies of E.D. cohorts cannot necessarily be extrapolated to patients in a private office setting since this survey indicates that there is a statistically significant difference in the ways in which patients in these two settings are managed.

This survey indicates that the practice guidelines[4,5] were largely not followed for this case in all three clinical settings. Since the patient case used in the survey was a female, following the practice guidelines would have entailed blood and urine studies and empiric antibiotics (in all instances or alternatively, if the WBC>15,000).[4,5] This survey shows that the actual frequencies of pediatricians ordering blood studies in the E.D., office, and daughter settings were 25%, 16%, and 12%, respectively. The frequencies of ordering

urine studies in the E.D., office, and daughter settings were 45%, 32%,, and 13%, respectively. Blood and urine studies together, were only ordered in 3%, 7%, and 4%, respectively (no statistical difference). The practice guideline's recommendation "option 2" of blood culture if the WBC is high was selected in only 17%, 6%, and 4%, respectively. Blood cultures were more frequently ordered regardless of WBC result in 40%, 12%, and 10% of instances, respectively. In the office and daughter settings, pediatricians largely refrained from empiric antibiotics. Even in the E.D. setting, 49% of the pediatricians refrained from empiric antibiotic use, while only 4% used empiric antibiotics regardless of the WBC result.

Almost no one used antibiotics without blood work of some type. For the E.D., office, and daughter settings, antibiotics were used without tests of any type in 1, 1, and 3 instances, respectively. Antibiotics were used without a blood culture in 7, 8, and 5 instances, respectively. The patient case used in this survey had no evidence of otitis media. If this patient had clinical evidence of otitis media with effusion (OME)[15], it is likely that the frequency of antibiotic use without a blood culture would have been higher despite recommendations that OME does not necessarily require antibiotics (as opposed to acute otitis media),[15-20] and the risk of bacteremia is similar in patients with and without otitis media.[21]

This substantial deviation from the practice guidelines[4,5] is not surprising since previous surveys have demonstrated this as well.[11,12] In addition, one cannot adopt the practice guidelines in isolation, considering the substantial number of publications in the literature with alternative recommendations. A brief listing of these demonstrating the diversity of recommendations is provided in table 5.

In theory, physicians might provide the most thoughtful consideration for the medical care of their own family members. While this is not always the case, due to conflicts of interest, physicians generally have the best knowledge base to make these decisions for their family members. This survey indicates that in this example, many physicians would not treat their patients in the same manner as they would treat their own family members.

The high cost of emergency care is in part due to the expense of maintaining a full service 24-hour emergency facility (staff and equipment). This survey indicates that part of the high cost of emergency care is the nature of the emergency department setting which, for various reasons, results in more tests being ordered. Office pediatricians were likely to order blood and/or urine studies on the E.D. patient, but less likely to order laboratory studies on their private office patient. This pattern was also noted in the group of eight pediatric emergency physicians. Thus, the E.D. setting is a factor that plays a major role since this study demonstrates that non-emergency physicians (general pediatricians) exhibited this same behavior.

Note that in the case scenarios, the office patient was seen on a Tuesday, while the E.D. patient was seen on a Saturday. The different days were chosen since typically, office patients are seen during the weekdays (during business hours) and E.D. patients are seen during evening and night hours and often on the weekends and holidays. Thus, the day of the week and the hour of the day are also part of the "clinical setting". The E.D. clinical setting encompasses the additional characterstics of weekends, holidays, and nights. In studies of E.D. febrile children, it is highly likely that the vast majority of the patients do NOT present during office hours. The day of the week and hour of the day MUST be included as part of the E.D. setting since this difference is reality. Standard office hours encompass roughly one-fourth of the 7-day week, while non-office hours encompass three-fourths of the week. This time distribution substantially favors E.D. visits during non-office hours.

Other factors present in the E.D. setting include absence of a longstanding physician-patient relationship and the higher risk nature of the E.D. given patient self-selection to seek emergency care.

While the assessment of patient reliability is assumed to have a significant impact on how physicians manage patients, patient profiles were assumed to be the same in the case examples in this survey (although there was less certainty of the assumed patient profile for the E.D. patient). Factors which may account for the difference in diagnostic and therapeutic approaches for the office and E.D. settings include: 1) An E.D. patient may be perceived to be at higher medical risk than an office patient with the same presenting history and exam. 2) An E.D. patient does not have the same long term relationship with a physician that a private office patient has. 3) There may be higher expectations of perfection for an E.D. patient, where follow-up with the same physician is unlikely compared to a private office patient where follow-up is more likely.

In summary, under the limited circumstances of this survey, in approximately half the surveyed pediatricians, the clinical setting has an effect on the diagnostic and treatment strategies chosen when evaluating a febrile child at risk for occult bacteremia with E.D. patients receiving more laboratory tests and antibiotic treatment compared to office patients. Kinship also has an effect with a child (daughter in this instance) of a pediatrician receiving the fewest laboratory tests and antibiotic treatment.

Appendix A - Case Presentation

1. You are in your <u>office</u> and you evaluate the following child on a <u>Tuesday</u>:

14-month old female with a history of fever to 103F/39.4C degrees (rectal) at home since 7:00 a.m. today. It is now 3:00 p.m. She has vomited once. No diarrhea. There is an occasional cough but no nasal congestion noted. She goes to day care, but there are no known ill contacts. Mother gave 80mg of acetaminophen 4 hours ago. She reports that the fever went down after the acetaminophen but she feels hot again. Her oral intake is slightly less than normal.

Exam: Temp 103.0F/39.5C (rectal), P120, R34, BP 75/45, Wt 10 kg (50th pctile). Alert, active, not toxic, not irritable. Not fussy when bounced by mom. Anterior fontanelle closed. Eyes clear. TM's normal. Oral mucosa clear and moist. Pharynx normal. Neck supple. Heart regular, no murmurs. Lungs clear. Not coughing. No tachypnea. Abdomen soft, flat, BS active, non-tender, no hernias. No CVA tenderness evident. Color, perfusion, muscle tone good.

PMH-healthy. Family profile: This is your practice's "average patient" with your practice's "average parents".

A. Please check off the diagnostic options that you would do (may check more than one):

- ❑ Home observation. Parent to call me if any worsening.
- ❑ Administer acetaminophen in office and reassess in office in 45 minutes*.
- ❑ CBC
- ❑ Blood culture
- ❑ Blood culture only if WBC elevated (eg., >10,000 or >15,000 or >20,000)
- ❑ Bag urine specimen studies
- ❑ Catheterized urine specimen studies
- ❑ Refer to Emergency Department for further evaluation
- ❑ Admit to hospital inpatient unit

B. Please check off the antipyretic treatment options that you would do (Check one or two. Checking off more than one means that you would recommend both measures):

- ❑ Acetaminophen 80 mg every 4 hours

- ❑ Acetaminophen 120 mg every 4 hours
- ❑ Acetaminophen 160 mg every 4 hours
- ❑ Ibuprofen 50 mg every 6-8 hours
- ❑ Ibuprofen 100 mg every 6-8 hours

C. Please check off the antibiotic treatment option that you would do (check one only):

- ❑ No antibiotics
- ❑ Antibiotics if WBC is greater than 15,000
- ❑ Antibiotics if WBC is greater than 20,000
- ❑ Antibiotics regardless of WBC result

D. If you considered an antibiotic treatment option above, please check off which antibiotic you would choose (check one only):

- ❑ Oral antibiotics (any one)
- ❑ IM ceftriaxone (Rocephin) plus oral antibiotics (any one)
- ❑ Daily IM ceftriaxone for at least 3 days

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News and Notes Henry N. Yokoyama MD

Life in These Parts

The Doctor's Dictionary

Experience, n. *Something doctors rely on when they haven't read anything for awhile.*
Mayo, n. *1. Surgical clamp 2. Famous medical clinic 3. Goes great with ham and cheese.*
Neuroses, n. *1. A psychiatrist's bread and butter 2. Freshly cut flowers.*
Aphorism, n. *An adage or wise saying. As in, "Half a nurse is better than none," of, "A gallbladder in the hand is worth two on the floor."*
Body Fluids, n. *Various liquids that drip, ooze, or shoot out of patients—usually at the least opportune moment.*
Committee, n. *A group of people who meet regularly to organize their inefficiency.*
Drug, n. A substance which, when given to a patient produces the side-effect you forgot to mention.
Hypochondriac, n. *A patient who believes that each illness will be his last. Sooner or later, he will be right.*
Ward clerk, n. *The hospital's version of the appendix—every ward has one, but it's not clear what they do.*

Physician Moves

Internist ***Jack Ikeda*** retired, effective July 1 and internist ***Janice K. Harada*** took over his practice at 2065 S. King St., Ste 202.

In June, Straub Doctors On Call which has clinics at:
Royal Hawaiian Hotel
Hyatt Regency Waikiki
Hawaiian Regent Hotel
Hilton Hawaiian Village
Kahala Mandarin Oriental
Ihilani Resort & Spa
Announced that it has moved from Outrigger Waikiki to: Bank of Hawaii building on Kalakaua Ave., Suite 212.

Also in June: Dermatologist ***Carla Nip-Sakamoto*** opened her office at Queen's POB I Ste 1009.

Internist ***Richard K.Y. Lau Jr.*** relocated to Kuakini Medical Plaza, Ste 712 (Richard was associated with ***David Pang*** at Nuuanu Clinic. David will be joined by internist ***Thomas Tan***)

Health Tid Bits

Good News

- Researchers have found now that high tension power lines do not cause leukemia in kids.
- The rate of women with anxiety and depression drops from 10.8% in premenopausal women under 55 to 5.3% in postmenopausal women over 55.
- In patients with prostrate cancer which has not spread, the odds of dying from the cander in 10 years drops to less than 5% when the entire gland is surgically removed.

Bad News

- Loss of brain tissue (which occurs natually with age) is greater in older people with hypertension.
- Inhaler Alert: Researchers have found now that chronic use of corticosteroid inhalers is linked to glaucoma and also to cataracts.

Conference Notes

"Oral Therapy for Type II; New Drugs and New Choices" by visiting professor, ***Matthew Riddle, Prof. Med***, Oregon Health Sciences University Portland, at QMC Friday am, May 9.

- **Natural Hx Type II:** Strongly inherited; involves both abnormal insulin secretion and abnormal insulin responsiveness of tissue. Ability to maintain normal glucose levels declines with advancing age. Women first display their vulnerability to hyperglycemia during pregnancy as gestational diabetes. Glucose levels rise asympotmatically. Diagnosis is often delayed for years after actual onset of overt NIDDM. The response to various treatments (diet, sulfonylureas, insulin) is typically better at first than several years later.
- **HbAlc predicts complications:** HbAlc 7.0 critical level (Normal is 5-6) Glycemic control prevents complications:
 - Interventional studies viz DCCT (for IDDM) and the Kumamoto Study (NIDDM) have shown that lowering HbAlc from 9.0 to 7.0 reduced retinopathy 76%; nephropathy 54% and neuropathy 60%.
 - A 1% rise in HbAlc causes 30% greater risk of complications.
- **Glycemic Patterns of Type II:**
 - Fasting hyperglycemic pattern
 - Post-prandial hyperglycemic pattern
 - Both present after long duration.

Abnormal physiology in Type II
- Low basal insulin and high glucose output.
- Impaired hormone response to meals
- Insulin resistance worsens the effects of both.

- Comparison of Drug Therapy:

Drug	Fasting Glucose	Post prandial Glucose	Insulin Resistance
Sulfonylurea	++	-	-
Metformin	++	-	+
Acarbose	+	++	-
Troglitazone	+	+	++

- Sulfonylureas: Powerful & inexpensive; once daily does; few side effects; weight gain; risk of hypoglycemia

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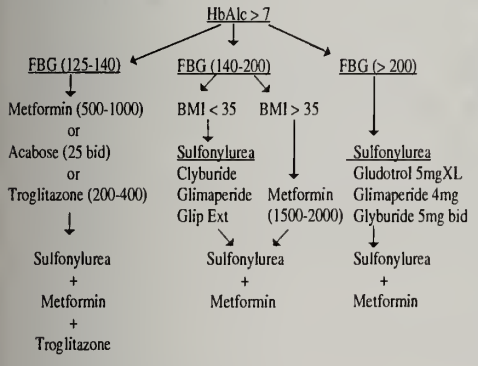
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- Glimaperide (Amaryl): metabolized by liver entirely; kidney not involved; long acting 24 hrs; Dose: 1 mg; 4mg, 8mg; lowers HbAlc.
- Metformin: lowers HbAlc 1-1/2 - 2%; wtg loss and lowers BP; GI side effects in 5% of population esp at doses over 2000mg; renal excretion; avoid use with serum creatinine above 1.3; no effect on pp hyperglycemia.
- Acarbose (Precose): safe; controls pp glucose; frequent dosing; flatulance 20-30%.
- Troglitazone (Rezulin): lowers serum insulin levels by 40%; lowers lipid; lowers FBS; lowers pp glucose; given in combination with insulin; 600mg lowers HbAlc 1-1/2%; standard dose 400mg; insulin rescue.

Cost Analysis

	Lowers HbAlc%	Dose	Cost/mo
Sulfonylurea			
Glyburide	1.5	5mg bid	$15
Glimaperide	1.5	4 mg	$20
Glip Extended	1.5	5 mg	$10
Metformin	1.5	800mg bid	$45
Acarbose	0.75	50mg bid	$40
Troglitazone	0.75		$180

Clinical Algorithm



After starting Drug Therapy:

Check HbAlc q 4 - 6 months striving for 7.0 or lower. Expect secondary failures within 5 years. Watch other cardiovascular goals:

BP 130/85 or lower
LDL 100 or lower
ASA 325mg/d

- **Acarbose** (For moderate FBG + high HBAlc)
 Dose:
 25mg (1/2 50mg) with breakfast 4 weeks
 25mg c breakfast & dinner 4 weeks
 25mg tid ac 4 weeks
 50mg tid ac if necessary

- **Metformin**
 Dose:
 500mg for 4 weeks
 500mg bid for 4 weeks
 500mg tid for 4 weeks
 850mg bid or tid

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Announcement

Monthly Bereavement Support Groups.— Kailua: St. Christopher's Church, 2nd and 4th Mon., 6 to 8 pm; **Waianae:** Maluhia Lutheran Church, every other Thurs., 10 to 11:30 am; **Mililani:** Olaloa Retirement Community, 95-1050 Makaikai St., 1st and 3rd Tues., 2 to 3:30 pm. For info:, call Fritz Fritschel, 924-9255, ext. 235.

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Efficacy of Advance Directives in a General Hospital

Continued From Page 206

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There's No Excuse for Domestic Violence

The Weathervane

Russell T. Stodd MD

Everybody gets so much information all day long that they lose their common sense.

An HMO in southern California funded a research team from the Veterans Affairs Medical Center and UCLA to study rates of cataract surgery, comparing fee for service with prepaid health settings. Their findings were reported in *JAMA* of June 11, 1997. Factors of age, sex, and diabetes mellitus status were controlled and the data showed that FFS patients were twice as likely to have cataract extraction as patients on prepaid plans. This is a shock? The findings coincide with previous studies which revealed that prepaid plans have lower rates of cholecystectomy, appendectomy, C-sections, hysterectomy, tonsillectomy, and procedures for coronary artery disease. It should come as no surprise that increased corporate earnings equates with less patient care. As demonstrated so vividly by the airlines, when cost containment is the prime consideration, quality and service go down.

Cleanliness is next to—impossible.

Hygiene Guard is a new big brother type device invented to determine if and when bathroom users wash their hands. Employees at restaurants or other businesses must wear a badge which activates a ceiling device when they enter the porcelain closet. The badge will then blink until the employee pumps the soap dispenser and stands before the wash basin for 15 seconds. The reason for this spying intrusion is simply that a survey sponsored by the American Society of Microbiology revealed that 39% of males and 26% of females do not wash their hands after using the facility. And that brings to mind that all physicians must wash hands before and after each examination.

A drug is substance that when injected into a guinea pig, produces a scientific paper.

According to a small study reported in the *Archives of Ophthalmology*, seventeen eye surgeons participated in an evaluation of drugs for hand tremors. On three separate days they each received 200 mg. of caffeine, 10 mg. of the beta blocker propanolol, or a gelatin placebo. The placebo and caffeine-use appeared to cause a slight increase in hand tremors, but the propranolol reduced tremors by 22%.

A man's worst difficulties begin when he is able to do as he likes.

The Coalition for Excess Weight Risk Education has studied 33 of America's cities to determine the rates of obesity. Using parameters of height and weight for 20,000 people, "Fat City" turned out to be New Orleans with a rate of 37.5% of adult residents defined as obese. Denver, at the opposite extreme, has the lowest rate at 22.1%. The study seemed to indicate that high unemployment and low per-capita income tend to have higher rates of lardosis. Outdoor living, such as Denver, San Diego, Phoenix, appeared to be related to lower rates. Cleveland at 31.5% was said to have more ethnic food, and also harsh winters which prompt people to eat more meat, buttermilk, biscuits and french fries, apparently in an attempt to help during hibernation. Sorry, didn't find a figure (no pun) for Honolulu.

Honesty is the best policy—when there is money in it.

Marc Gardner, for the past three years, a manager at three Columbia Hospitals, including prestigious Sunrise Medical Center in Las Vegas, resigned to write a tell-all book about the sins of the huge medical company, which he hopes to call "*The Columbia Malignancy*." He earned a degree in hospital administration, and first worked at a Catholic hospital, where meetings began with a prayer. When he switched to Humana hospital, he was suddenly playing golf and wheeling and dealing in the cost-cutting arena. When Columbia bought 73 spun-off Humana hospitals, Mr Gardner said "Columbia was Humana on steroids—20 times more aggressive. I committed felonies every day." He fired 15 nursing managers, replaced RNs with LPNs who earn 1/2 as much, and purchased low cost supplies. Columbia maintained a monthly "score card" ranking the hospital on nearly a dozen measures, including number of surgeries, profit margin and cost of supplies, but not on quality of care. Gardner states, "Columbia hospitals exist to make money—period." Another former Columbia CEO said he was told to try to ensure that 100% of Medicare patients were coded as having complications. He said, "This is impossible; this is insane." Now the feds have descended on Columbia for possible violations of law, bilking Medicare, buying and structuring doctors' practices, and paying for patient referrals. A Columbia spokesperson, Lindy Richardson said, "We think we are within the law. And if the law is incorrect, change the law." These are the same nice people who are looking for an opportunity to invest in hospitals in Hawaii.

Experience: A comb life gives you after you lose your hair.

A patient underwent a secondary open rhinoplasty and removal of chin implant. When she awakened, she noted severe pain in her right eye, and informed her plastic surgeon. He examined her sutures only, and allowed her to go home. The following day she continued to complain of pain in the eye. The surgeon referred the patient to an ophthalmologist who found a 40% central corneal epithelial defect. In the following months the patient continued to suffer periodic episodes of recurrent corneal epithelial erosion. She sued the surgeon and the anesthesiologist alleging malpractice for failing to properly tape her eyes closed during the operation. The initial trial court granted a summary judgment in favor of the doctors. However, the appellate court overruled noting that the surgeon admitted to the patient he thought her injury had been caused by inadequate lid closure during surgery.

Drinking makes such fools of people, and people are such fools to begin with, that it's compounding a felony.

Prior to June of this year, hospital emergency rooms in Hawaii were unintentionally viewed as safe havens for drunk drivers. Fearing confidentiality laws, ER docs would not reveal the blood alcohol level of patients, even when they were perceived as seriously impaired. High risk drivers were not being legally tested for alcohol in ERs, were not being prosecuted, did not lose their licenses and were not assessed for an alcohol problem. Now, thanks to Senate Bill 377, signed into law by Governor Cayetano on June 2nd, doctors have some latitude in identifying these problem drivers. Under this measure, medical personnel in ERs or other health facilities must release BAC information to a law enforcement officer when a patient has been involved in a highway crash and is legally "under the influence" with a BAC of 0.08 or more. This practice will be limited to the person suspected of being the driver unless that information is not available. Grateful thanks go to testimony provided by Hawaii MADD (initiated by the HMA Auxiliary 14 years ago), the HMA, HEPA and others.

It's morally wrong to allow suckers to keep their money.

For the really bored airline traveler, Swissair is now the first major airline to allow in-flight gambling. Just slip your credit card into the slot, and the computer will record your winnings and losings. So far, the US Department of Transportation bans the practice in this country and on international flights to and from the United States.

Addenda—

- Average number of Americans who die each day from smoking-related illnesses: 1,145.
- Number of kids who become "regular" smokers each day: 3,000
- Average age kids start smoking: 13
- Number of U.S. children under age 18 today who are expected to die of smoking-related illnesses: 5 million.
- Smokiest television network: **Fox** with 2.67 smoking scenes an hour.
- Really big potential winners in the great tobacco settlement issue: attorneys, who if granted a mere 1% will divide nearly 4 billion dollars (and they expect 3%, or about $11 billion).
- Should we require a seven-day waiting period for having a child? Would it be called the *Brady Bunch Bill*?

Aloha and keep the faith—rts ■

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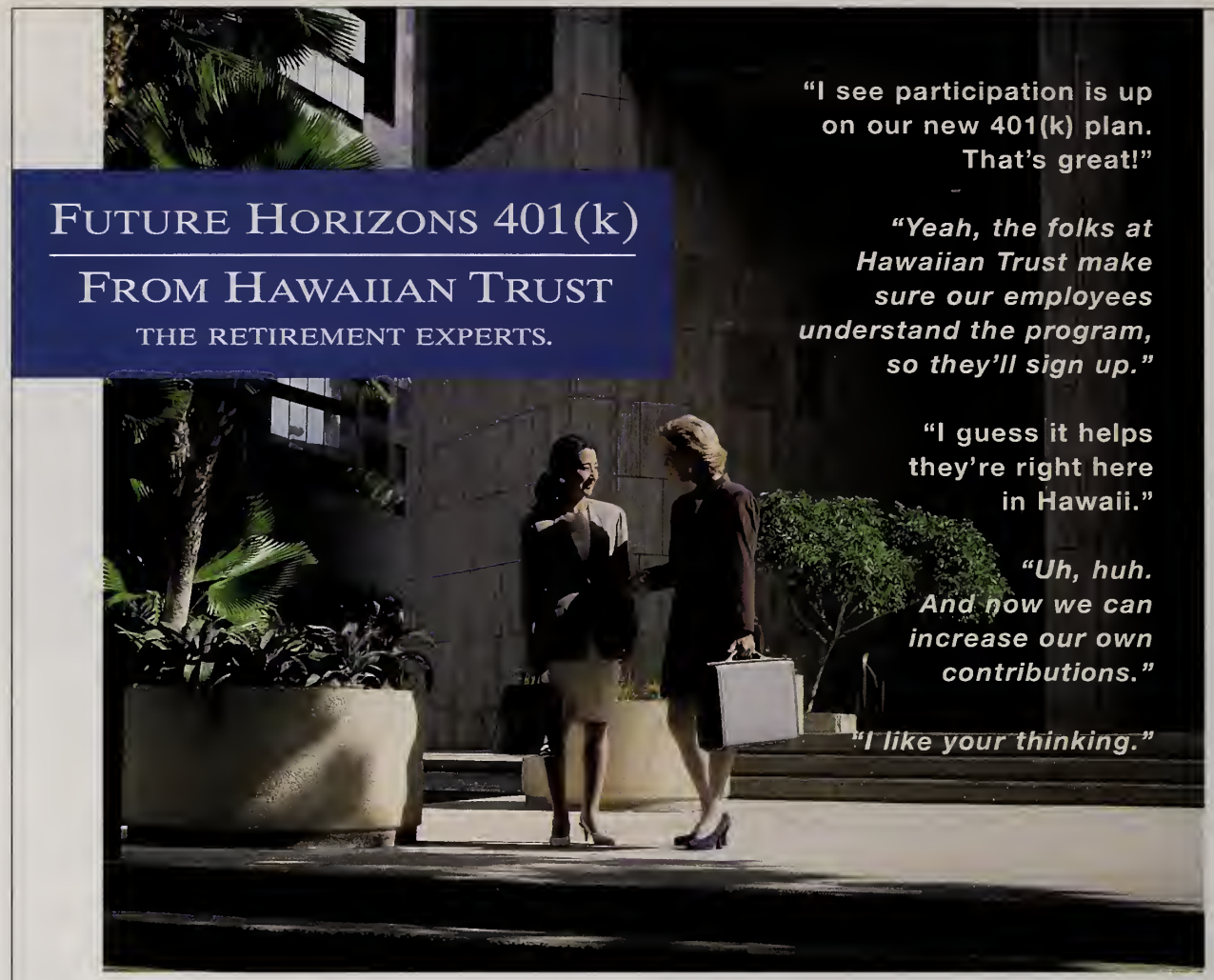
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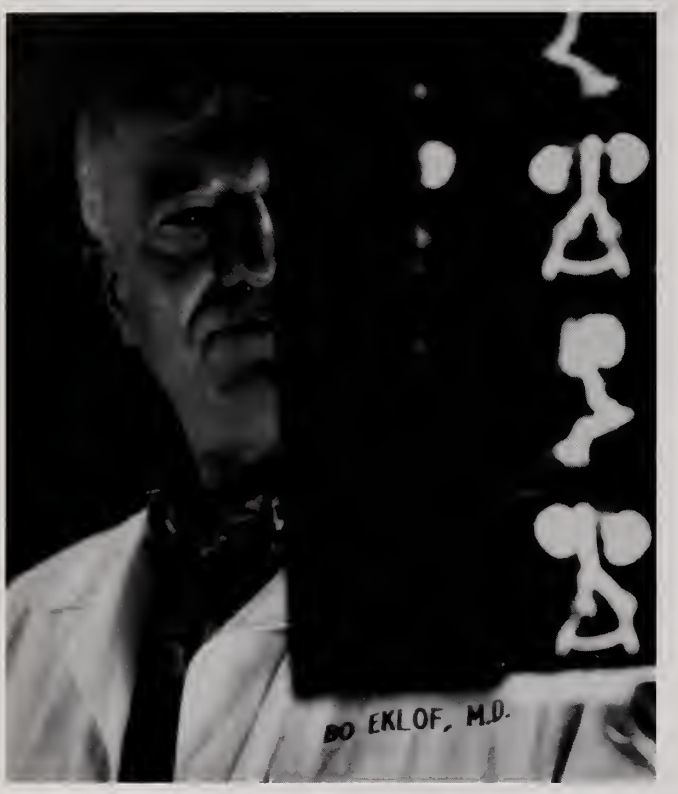
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– Friday Noon Conference –
Environment of Care Trends for the 90's: An Abbreviated Study of Issues Which Impact the Environment of Care for Patients and Employees
Ray Trombly, Rose Arpon, Michelle Fisher and Clayton Takara
September 12, 1997, 12:30 - 1:30 p.m.
Doctors Dining Room

Learning Objectives – At the conclusion, participants will be able to:
- update Straub physicians on specific environment of care issues that may impact their daily practice,
- understand the issues that impact environment awareness (Infection Control, Radiation Safety, Hazard Communications, Fire Safety, Chemical Spills, Body Mechanics and General Safety.

– Ophthalmology Conference –
Diagnostic and Therapeutic Challenges in Ophthalmology
J. Scott Kortvelesy, MD
September 18, 1997, 4:40 - 5:30 p.m.
Doctors Dining Room

Learning Objectives – At the conclusion, participants will be able to:
- recognize cystic tumors of the pancreas,
- differentiate cystic tumors from pancreatic pseudocysts.

– Friday Noon Conference –
Luncheon
Anti-Leukotriene Therapy for Asthma
Ronald A. Simon, MD
September 19, 1997, 12:30 - 1:30 p.m.
Doctors Dining Room

Learning Objectives – At the conclusion, participants will be able to:
- understand the role of leukotrienes in asthma,
- compare and contrast the FDA approval of anti-leukotriene drugs,
- determine where to place anti-leukotrienes in the management of asthmatic patients.

We would like to acknowledge the Educational Grant from Abbott Laboratories.

– Friday Noon Conference –
Ke Ola Ka Hana A Ke Aloha (Health is Aloha in Action) 25 Years of Providing Health Care to the Waianae Community
Richard P. Bettini, MPH, MA; Richard Friedman, MD; Kauila Clark, Merrie Aipoalani
October 10, 1997, 12:30 - 1:30 p.m.
Doctors Dining Room

Learning Objectives – At the conclusion, participants will be able to:
- understand the concept of community health centers,
- describe the financial impact of Quest managed care,
- list the range of services that are available for a community based primary care.

Please call Fran Smith at 522-4471 for more information.

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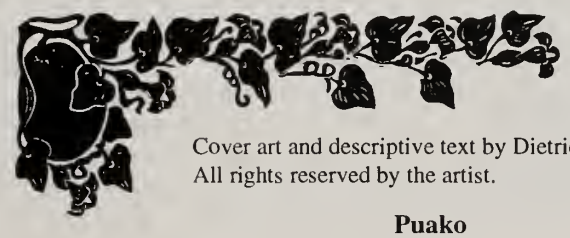
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Puako

This print depicts a place on the island of Hawaii famous for its many unique rock carvings.

Editorial

Norman Goldstein MD
Editor

Ophthalmology Special Issue

This Ophthalmology Special Issue and the following issue in October are other results of the enthusiasm of one very special Ophthalmologist, Robert Tuck Wong, MD.

Several years ago, Dr Wong suggested to our late editor, J.I. Frederick Reppun that an issue be dedicated to Ophthalmology. Once I gave the "go for it" to Dr Wong, he really did!—As he does with all of his activities. He enlisted the medical, surgical and writing talents of some of the very best Ophthalmologists in Hawaii.

There were so many excellent manuscripts collected by Dr Wong, that we have to publish them in two issues.

As a tribute to this very special man, we are reproducing the editorial, "the catalyst model" written by Fred Reppun in the July 1987 issue of the Journal.*See page 226 on this issue of the Journal.

Bob, Thank you for your efforts to establish our medical school and to keep it afloat via your lectureships and endowments.

Because of the efforts of Bob Wong, the University of Hawaii Foundations Robert T. Wong Lectureship now has a total market value of nearly $400,000.

Many thanks Bob, for serving as Guest Editor for these Special Issues.

*Reppun, J.I. F. editorial: the catalyst model, HMJ Vol. 46, No. 7, 260 & 267 July 1987.

University of Hawaii Foundation
Robert T. Wong, MD Lectureship

Lecturers

- 1985 - **Dr Robert C. Gallo**, Laboratory of Tumor Cell Biology, National Cancer Institute; "Basic Aspects of HTLV-1 and HTLV-3 and Their Link to Alterations of T-Cell Growth."
- **1986 - Dr Allan M. Lansing**, Humana Heart Institute International; "The Mechanical Heart: Progress and Problems."
- 1987 - **Dr Steven A. Rosenberg**, Chief of Surgery, National Cancer Institute; "Cancer Treatment with Activated Lymphocytes and Interleukin-2"
- **1989 - Dr Samuel Broder**, Director, National Cancer Institute, Bethesda, Maryland; "AIDS: Clinical Perspective."
- **1991 - Dr Hilary Koprowski**, Director, Wistar Institute, Philadelphia, Pennsylvania; "Clone to Clinic: Conceptual Approaches to Immunotherapy."
- **1992 - Dr Robert Peter Gale**, Associate Professor of Medicine, University of California, Los Angeles; "Medical Care in the Soviet Union."
- **1993 - Dr Donald I. Abrams**, Professor of Clinical Medicine, University of California, San Francisco; "AIDS: A View from the Frontline."

Continued on Page 234

Presidents Message

John S. Spangler MD

Please read your newsletter plus please register early for the annual meeting!

The annual American Medical Association meeting in Chicago was well attended and exciting. The results were well reported in the AMA news. I wish all could attend this meeting.

A major revision of our bylaws is now being discussed and will be finalized at our annual meeting. This is a time for all members to carefully consider the changes which will be outlined for you. Please read carefully all changes before the meeting so rapid resolution of the bylaws will be accomplished.

Remember that all our committee meetings except a few are open to all members. Please feel free to attend the Council meetings.

Medical School Hotline

Student Profile — Class of 2001 at the John A. Burns School of Medicine

Satoru Izutsu PhD
Associate Dean and
Chair, Admissions Committee

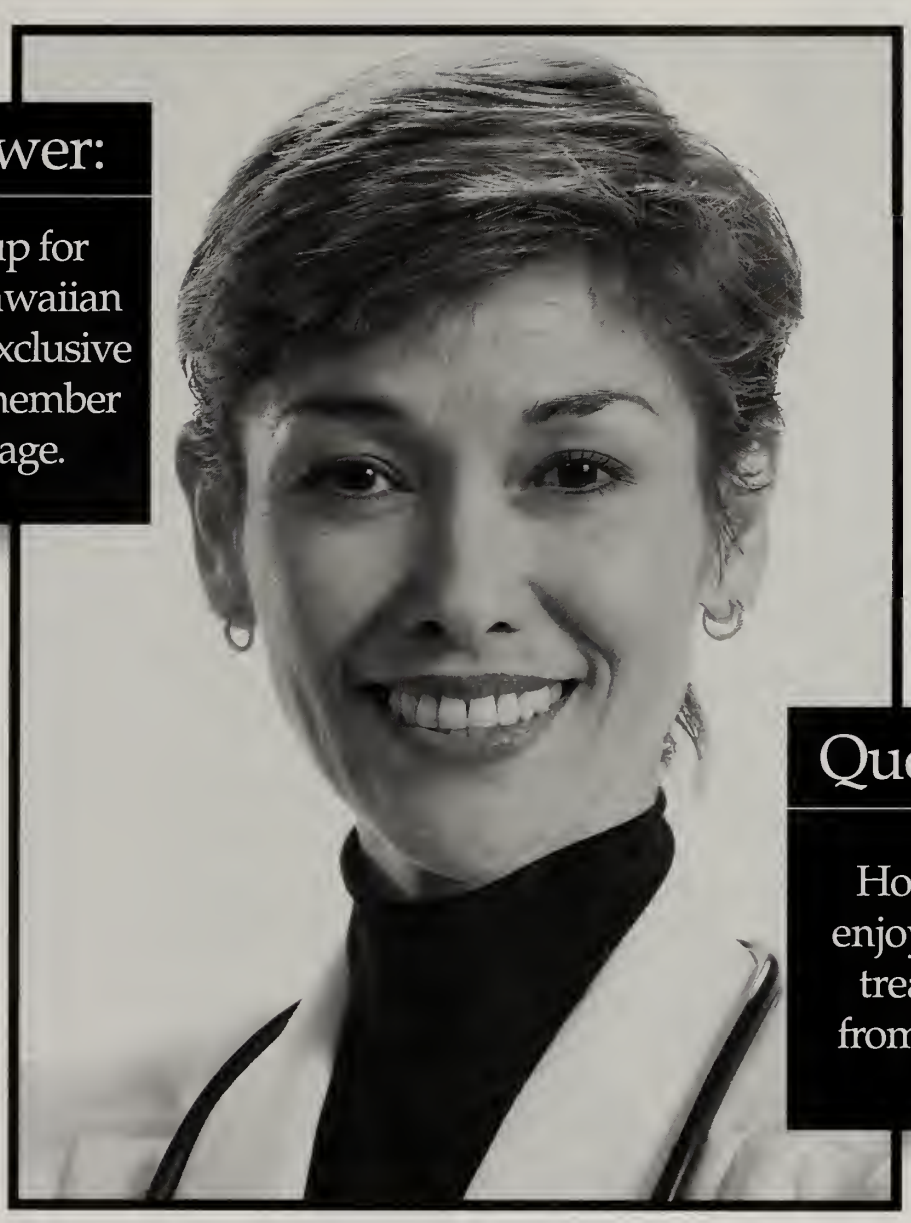
In August 1997, 27 women and 29 men began their four-year journey toward the MD degree. They are members of the 26th class to graduate from the John A. Burn School of Medicine and the 9th class to undertake their medical education in the "Problem Based-Learning (PBL)" format.

The Class of 2001 was selected from a total of 1228 applicants. Two hundred thirty-two, 189 in-state and 43 out-of-state, qualified to be interviewed. Forty-nine of the fifty-six medical students (MS1), whose average age is 23, come from Hawaii and 7 are non-residents (2 mainland states, 4 Guam and 1 from the Commonwealth of the Northern Marianas). Eight students are from the Imi Ho'ola Post-Baccalaureate Program which addresses diversity and those who are educationally, socially and economically disadvantaged.

The John A. Burns School of Medicine is the most ethnically diverse school in the nation. In this class, the following ancestries are represented: 15 Japanese, 9 Chinese, 7 Hawaiians, 6 Caucasians, 5 Filipino, 5 Koreans, 2 East Indian/Pakistani, 1 Chamorro, 1 Laotian, 1 other Asian, 1 Other Pacific Islander, 1 SE Asian/Non Vietnamese, 1 Thai and 1 Vietnamese.

Fourteen are graduates of Hawaii colleges (12-University of Hawaii and 1 each from Chaminade University and University of Hawaii, Hilo) and 42 are from mainland colleges which include

Continued on Page 261



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The Catalyst Model

J.I.F. Reppun MD

Reprinted from an Editorial by our Late Editor, Fred Reppun - Hawaii Medical Journal July 1987



Robert T. Wong MD

We have in our medical midst a catalyzer, one who makes things happen.

What has happened is an annual lectureship at our university's School of Medicine that has brought to Hawaii prestigious medical scientists, leaders in the forefront of innovative approaches to the resolving of tough medical problems that affect the health of all people. This very special event bears the name of The Robert T. Wong, MD, Lectureship.

In 1985, it was Gallo, the co-discoverer of the HIV as the cause of AIDS. In 1986, Lansing of Humana described his work with the Jarvik-7 artificial heart, and in April this year it was Steven Rosenberg MD, PhD, from the NCI in Bethesda who described his innovative approach to cancer treatment with his "Adoptive Immunotherapy" using lymphokine-activated killer lymphocytes mixed in with Interleukin-2.

Who has made this happen? Our own senior ophthalmologist Robert T. "Bob" Wong, MD, of course.

Before we delve into how Bob Wong became "the catalyzer" let's examine the man: Where did he come from, who is he and how did he happen to fill this role?

Bob has been practicing medicine for 46 years—he still is—still in the same location in downtown Honolulu where Union Mall now joins Bishop Street. He is 76 years old.

His father, Wong Hing came from China as a young man to work on the sugar plantations of the Big Island, but only for a short while. He became the cook for the Lyman family in Hilo and then went out on his own as the proprietor of Planters Market and of a small leasehold ranch in Olaa. He married a girl from Waianae on Oahu and they raised 15 children, of whom 12 are surviving. Bob was number three and Jimmy Wong, Ob/Gyn in Honolulu was number five, the only two who became doctors, although all were well-educated.

Bob was born in Hilo, went to Hilo High School and then the University of Hawaii from which he graduated in 1932. He went on to Jefferson Medical College in Philadelphia, graduating in 1936 after winning the gold medal in physiology and becoming a reserve officer in the U.S. Army. After 27 months of a rotating internship at Jefferson Medical College Hospital, he put in a year of active duty with the military and then went back to academia, and then to a residency in ophthalmology at Cleveland City Hospital. He was granted a master of medical science degree by the University of Pennsylvania in 1946.

On December 10, 1940 Robert was appointed ophthalmologist to the Western Reserve University 4th General Hospital with the rank of Captain. He was the only non-faculty member and moreover, a mere resident. This was a truly remakable event. He missed going overseas to Brisbane, Australia, with the unit early in 1942, when it was activated, because he came back to Hawaii in July 1941 at the end of his residency training. He was in Mabel Smyth together with others of the HCMS on Sunday morning, December 7, 1941, when the Japanese fleet attacked Pearl Harbor. The doctors were immediately given assignments to duty by the head of the Civil Defense, Bob Faus, MD, who was conducting the meeting at the time, and Wong found himself at Queen's drawing blood for the blood bank for the next several days. Henry Dixon, Faus' deputy, later assigned Bob to a small, makeshift army hospital in a school at the corner of 19th and Waialae in Kaimuki, to prepare for casualties in case of a Japanese invasion that never materialized.

Bob had opened an office for the private practice of ophthalmology on Union Street in September 1941. So, for a year, he divided his time between his own practice and the military. He served as ophthalmologist to both the Alsup and the Fronk Clinics next door. He served as sugical assistant to Dr. F.J. Pinkerton from 1941-1948. In those days, the only other ophthalmologists in Hawaii were F.J. Pinkerton, Cowan, Holmes, Robert Lee Sr., Moffat, Trexler, and Minatoya.

One of Robert's most satisfactory lifetime achievements was serving as ophthalmology consultant to the Hawaii Hansen's Disease program from 1946 to 1992.

Wong was appointed a consultant to the leprosarium at Kalaupapa, Molokai, in 1946 and he used to fly over frequently until 1950, after which he served the lepers at Hale Mohalu in Honolulu until its demise a few years ago.

Bob had met Harriet Leong, the sister of his college classmate, and they were married in 1934. Bob's satisfaction in having their two sons follow in their father's footsteps is patently manifest. Stephen, born in 1946, is professor of ophthalmology at Temple; Bradley, born in 1950, is a general surgeon in Honolulu. The father and two sons make an impossible picture in their American College of Surgeons formal trappings, as a threesome.

Robert Wong was president of the Hawaii Chapter of the ACS in 1961 and of the Honolulu County Medical Society in 1965. He became intensely interested in the idea of a medical school at the University of Hawaii, but let us tell the story in his own words:

> "At the height of his regime, Governor Burns decided to expand the University. He was informed that the only recourse lay in the expansion in the field of biological sciences. In 1964, Dr Allen B. Richardson (senior) and I were invited to lunch at Ciro's with the then UH president Hamilton and his legal







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counsel Kenneth Lau. When we were overcome with too much wine and delicious servings of shrimp scampi and pasta, my longtime friend Kenneth Lau asked what we thought of a 2-year medical school at UH. Without hesitation and with no thought to protocol, Richardson and I gave the two of them our personal approval. At the time, Richardson was president-elect of the HMA and I was president-elect of the county medical society. Within a week, we received letters thanking us for 'pledging the support of the medical community'! A short time later, the remarkable Terence Roger, PhD, chairman of the University's Department of Physiology, was appointed as a task force of one and ordered to proceed with the creation of the school of medicine.

"Dr Windsor Cutting, former Dean of Stanford Medical School, was selected as the Dean of the new school. A feasibility study was processed and within a short two or three months a quonset hut was moved to the northeast corner of the university campus. A professor of anatomy and a professor of pharmacology were appointed; the quonset hut was listed as the Department of Anatomy and Biological Research Building, and the medical school was formally dedicated. The first Professor of Medicine was Richard Blaisdell, MD.

Documentation of Robert Wong's participation in the establishment of the UH School of Medicine contained in a Hawaii Medical Journal report of Dean Terence Rogers' Retirement Dinner Speech. "It was your support which made it all possible. I met with Robert Wong, HMA president, at Leahi. He stood up and said, 'Let's cut out the BS and start the medical school.' Very crude language!!! but very effective!"

"By contrast, the Hershey School of Medicine of the Pennsylvania State University had taken nearly ten years to plan, and had required almost a hundred million dollars to construct. Even so, it nearly failed of fruition, had it not been taken over by the State University.

"Without any funding from the State of Hawaii, Task Force Rogers almost singlehandedly, with a little help from the NIH, brought into being the UHSM. The final miracle performed by Dr Rogers was to obtain the necessary certificate of accreditation, which was granted with almost no reservations.

"The primary reason for the existence of this medical school is to raise and maintain a high standard and quality of medical care in the State of Hawaii."

From a deep sense of obligation to his parents and to his brothers and sisters who had made sacrifices on his behalf, and to his own good fortune in having become a physician at the feet of Aesculapius in Philadelphia, Bob Wong had devoted himself to supporting the John A. Burns School of Medicine these past 20 years. However, he has jumped ahead and he is now quite enthused over the success of the current annual lectureship program which has furthered the original purpose of the establishment of the medical school, i.e. to elevate the standard of medical care in the community. We quote from Bob once more:

"I have supported the medical school since its inception. My lectureship, however, was established as a result of an unusual chain of circumstances. Several years ago I helped a young man gain admission to Jefferson Medical College. Subsequently, his grateful mother Jean Wong, a dedicated academician, died and in her legacy left $15,000 at the UH School of Medicine in my name. In 1984 I matched that initial contribution in order to start the Fund. Since then, it has grown to over $300,000, thanks to gifts from other friends and colleagues, and in particular a major contribution from the estate of Beatrice Watson Parrent. The lectureship has created an important annual scientific contribution to medicine in Hawaii."

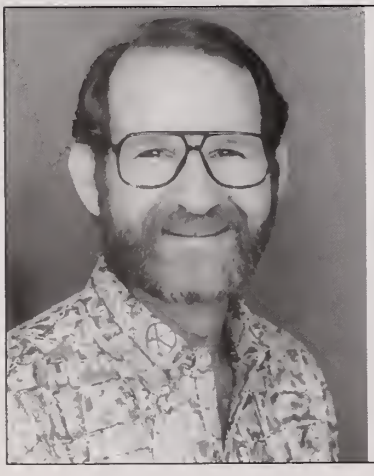
Robert Wong, the catalyzer, is particularly pleased that as a result of Dr Gallo's visit to Hawaii in 1985, the Blood Bank of Hawaii began to test every donor for HIV, thus assuring its non-transmissibility via blood transfusions (which very likely may have happened before then). He is pleased that Dr Lansing's visit may have helped inspire Livingston Wong and Ricardo Moreno to proceed with the first heart transplant in Hawaii recently, and Bob is hoping that Rosenberg's lecture may stimulate cancer research in Hawaii to greater heights.

With Bob as a model, perhaps others in the profession will become similarly imbued with an urge to establish forever living memorials.

Editor's Note:

Bob Wong is a true catalyst, as the you will see in this issue and part II of the Special Issues on Ophthalmology.

Beginning with Bob's History of Ophthalmology in Hawaii, we have excellent manuscripts by, Doctors Sugiki, Drouilhet, Kokame, Camara, Yamamoto and our contributing editor Russell Stodd. Russ has excellent vision—he sees "Ophthalmology in Hawaii in 1997 and Beyond." Look for part II next month.



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History of Ophthalmology in Hawaii

Robert T. Wong MD, MMS, FACS*

After Captain James Cook's discovery of the Sandwich Islands in 1778 and Captain George Vancouver's visit in 1793, the Hawaiian nation was devastated by foreign diseases to which it had no immunity. During the time of the Discovery Era of the 1770's, scholars estimated the Hawaiian population to have been between 250,000 and 300,000. That number fell to 108,579 according to an 1835-1836 American missionary census. The population dropped even further to 84,165 in a 1850 government census. In 1887 King Kalakaua reported that the Hawaiian population of 400,000 had been reduced to one-tenth its size.[1] Gonorrhea and syphilis in their most virulent forms were first introduced, resulting in severe disabilities, infant deaths, infertility, and *ocular complications.* Then measles, whooping cough, influenza, smallpox, cholera and tuberculosis took their toll.

The earliest report of ophthalmological problems in Hawaii was by a missionary physician Alonzo Chapin. He wrote in the 1830s, "Ophthalmia of the purulent form, abounds in every portion of the group [i.e., population], and opaque corneas and thickened coats of the eyes, are very numerous."[2] Missionary Mercy Whitney filled her journal with references to "the ophthalmia." On February 7, 1830, she wrote "I have an attack of it almost every year of our residence here."[3]

In his 1954 work, *Nine Doctors and God*, Francis John Halford describes how even physicians were not immune to ophthalmological problems. "In 1844 missionary physician James Smith of Koloa, Kauai, complained of sore eyes, probably conjunctivitis, which so many of the missionaries seemed to pick up within a short period of time after landing, obviously a contagion from the Orient, where ophthalmia is common and chronic.[4] This affliction is usually accompanied by a catarrhal condition of the nasal and bronchial passages. It has been suggested that these symptoms are allergic responses to the molds and pollens prevalent in the moist and humid tropical atmosphere of the islands. Another possibility is trachoma, a disease endemic in the Orient."

Robert C. Schmitt's thesis entitled "Two Centuries of Eye Care in Hawaii," was written with the collaboration of Ogden D. Pinkerton MD, and published in the *Hawaiian Journal of History* in 1985. Schmitt and Halford left the only substantial references to the history of ophthalmology. Schmitt notes that the first person to sell eyeglasses was E. H. Boardman, a maker of watches and chronometers. On September 9, 1846, Boardman advertised "gold, silver and steel-framed spectacles and other goods for sale." Optometry emerged as a separate discipline when "An Act to Regulate the Practice of Optometry" was passed by the 1917 Territorial Legislature. The law required all optometrists to have at least two years of high school and either three years of experience in a registered office or a degree from a reputable school of optometry. The most famous eyeglass seller was William "Doc" Hill, who was as an optician and optometrist. He was the first licensee under the newly passed Optometric Act. He became involved with high-level financial circles and the Hawaiian Legislature.

According to Schmitt, who depended on commercial journals for reference, one of the earliest physicians specializing in eye disorders was Joseph Bechtinger, MD; a multilingual Austrian who moved from Washington, DC to Honolulu in 1866. For six months, beginning March 24, Bechtinger advertised his services, with "particular attention paid to the Diseases of the eyes." He sailed for Hong King on March 2, 1867 and eight years later he advertised his Eye, Ear, Nose and Throat Institute in San Francisco.

In 1872 a Hugo Stangenwald, MD offered to treat "patients suffering from Chronic Diseases including the diseases of the Eye and Ear, Throat and Lungs." In 1880 Charles Neilson, MD advertised "Eye and Ear Cases successfully treated." E. Pontoppidian, MD, a 38-year-old German arrived in Honolulu on October 2, 1881 and described himself as an "Oculist, Physician, and Surgeon, Eye Diseases a Specialty." Three months later he discontinued his newspaper notices and left the islands. In 1896 Dr H.C. Sloggett was listed in the directory as a Honolulu "Eye and ear specialist," and Dr William L. Moore of Hilo as, "Makes a Specialty of Eye and Ear." From 1899 to 1905, the Honolulu Eye and Ear Infirmary was operated first by Dr Sloggett and later by Dr Moore.

Dr William Gibson Rogers was the first Hawaii ophthalmologist with authenticated credentials. He was born in Greenfield, Ohio, on February 14, 1864, and received his medical degree from Pulte Medical College in Cincinnati, Ohio, in 1891. From 1899 to 1900, Dr Rogers took a special course at the Royal Ophthalmic and Central London. He came to Honolulu in November, 1900 and opened an office specializing in diseases of the eye, ear, nose and throat. In 1904, Dr Rogers took a postgraduate course at the Manhattan Eye, Ear, Nose and Throat Hospital in New York, followed by additional specialty training at the Postgraduate Hospital, New York, in Vienna in 1909 to 1910, and the Chicago Polyclinic Hospital in 1916. From 1917 to 1918, Dr Rogers served as eye, ear, nose and throat consultant for the Selective Service medical advisory board. He retired in 1920 and died in Honolulu on

*Clinical Professor of Surgery
Division of Ophthalmology
Department of Surgery
University of Hawaii
John A. Burns School of Medicine

September 29, 1936.[5]

About the time that Dr Rogers retired, Dr. James A Morgan arrived in Honolulu and opened his office at the Young Hotel Building to practice eye, ear, nose and throat medicine (EENT). He had trained at the renowned Philadelphia General Hospital.

Leprosy

Any history of ophthalmology in Hawaii must mention a disease endemic in Hawaii—leprosy or Hansen's disease. Leprosy, with its inevitable ocular involvement before sulfone drugs, became a major public health problem in the mid-nineteenth century. The Hawaii Board of Health, established in 1850, founded a leper settlement at Kalawao, Molokai in 1865 and moved it to Kalaupapa a few years later. King Kamehameha V by direction of the Board of Health mandated that all lepers be isolated from the general population. The "Act to Prevent the Spread of Leprosy" authorized police officers, and Board of Health agents to arrest and deliver alleged lepers for medical inspection and for removal to a place of treatment or isolation.[6] Poor nursing and medical care, lack of food, clothing, and shelter, and absence of law and order for several decades turned this banishment into the most inhumane edict in Hawaiian government history.

Before the advent of sulfone drugs, in 1946 nothing could arrest the disease. From 1920 to 1946, chaulmogra oil was injected intramuscularly frequently causing renal damage. Presently, the principal drugs for treatment of leprosy are dapsone (sulfone), rifampin, clofazimine, ethionamides, corticosteroids, and atropine for iridocyclitis. The *Mycobacterium leprate* can now be cultured in the live nine-banded armadillo, a *Dasypodidae*.

Leprosy affects the eyes in several ways;: it damages the zygomatic branch of the facial nerve, causing paralysis of the orbicularis muscle, it damages the trigeminal and nasociliary nerves causing loss of corneal sensitivity, conjunctivitis, keratitis, corneal ulceration, iridocyclitis, and secondary glaucoma; it damages the sensory nerve fibers of the cornea causing early photophobia and eventual anesthesia. Iridocyclitis and uveitis are very common complications.

From 1922 to 1948, Dr F.J. Pinkerton regularly visited Kalaupapa and provided surgical care for the ophthalmological problems.

Dr Robert T. Wong was the ophthalmological consultant from 1948 to 1992. He made monthly visits to Kalaupapa on a single-engine plane, which made many hazardous landings. One of his last patients before he retired in 1992 was from the Hansen's Disease Program.

Dr Donald Sort became the principal consultant to the program in 1972 and he served in the program until his death in 1996.

Advances in Ophthalmology

In 1941 Hawaii was just emerging from a decade of severe economic depression. The population statistics were:

	1940[7]	1990[8]
All Islands	422,770	1,108,229
Oahu	257,696	836,231
Honolulu	179,358	377,059

The gross state product was $309 million in 1940 compared to $26,945 million in 1990.[9] Medical care, particularly ophthalmology, was of comparatively high quality, considering that Hawaii was an agricultural community isolated from medical academic centers. Kuakini Hospital was a small institution; St. Francis had been founded just a decade earlier; Queen's Hospital was our only major hospital with a national reputation. There were no peer review committees, but our notable Drs Nils P. Larson, Joseph Strode, Harry Arnold, Sr, Rogers Hill, and F.J. Pinkerton were our leaders who elevated the quality of medical care.

Since 1941, ophthalmology has seen more research and instrument development than in any other era. Electron microscopy has unraveled histochemical secrets of the eye previously never imagined. Newer diagnostic tools include fluorescein angiography, ultrasonography, electroretinography, computerized axial tomography, and radioactive phosphorous (P_{32}). Therapy has been revolutionized by new antibiotics, corticosteroids, diuretics, antimetabolites, antifungal and antiviral agents, and antihypertension ocular agents.

Innovations during the past 50 years include the use of alpha-chymotrypsin in cataract extraction, cryosurgery, phacoemulsification and phacofragmentation of cataracts, implantation of intraocular lenses, refinement of suture materials and needles, refractive surgery, retinal surgery and keratoplasty, laser photocoagulation, and new techniques in tumor and vitreous surgery. In recent years, the operating microscope has enabled the ophthalmic surgeon to perform operations with incredible accuracy and precision.

Neuro-ophthalmology and neurosurgery were advanced by Ralph Cloward. The influx of specialists began to restrict the surgical privileges of general practitioners. The leaders in ophthalmology were F.J. Pinkerton, Harold Moffat, Thomas Cowan, Robert H. Lee, Sr., Wilfred Minatoya, and Robert T. Wong.

Cataract Surgery

In 1941, cataract surgery was done as follows: first a 170-degree corneoscleral incision with the von Graefe knife; then a complete or peripheral iridectomy; followed by pre-placement of corneoscleral sutures; finally removal of the lens with the Kalt or Arruga lens forceps Complications included injury to the iris with the cataract knife, rupture of the lens capsule with the forceps, vitreous loss, and wound separation. The Kalt needle with its fine point, round edge, and insufficient rigidity made closure of the corneoscleral wound difficult. Sharp, beveled, cutting-edge needles with adequate rigidity became available in 1942. Barraquer's erisophake became available in 1950, and the keratome replaced the von Graefe knife. Shigemi Sugiki procured the first electrically powered cryoprobe for lens delivery in 1965, and phacoemulsification became available in 1971. *Intraocular lens implantation, (without doubt the most significant development in ocular surgery) began in 1972.* The pioneers of this procedure in Hawaii were Drs Percival Chee, Wayne Wong, and Gerald Faulkner.

Intraocular Lens Implantation

In 1949 Ridley of London introduced a lens implant which was unsuccessful because of the weight, inadequate fixation, and endothelial and intraocular complications. In the 1950s an anterior chamber lens was devised. Even with internationally known surgeons such as Strompoli, Danneheim, Choyce, Worst, and Barraquer involved, the high incidence of post-operative complications nearly

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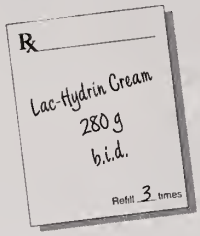
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Information for patients: Patients using Lac-Hydrin Cream should receive the following information and instructions:

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2. Patients should minimize or avoid use of this product on areas of the skin that may be exposed to natural or artificial sunlight, including the face. If sun exposure is unavoidable, clothing should be worn to protect the skin.
3. This medication may cause stinging or burning when applied to skin with fissures, erosions, or abrasions (for example, after shaving the legs).
4. If the skin condition worsens with treatment, the medication should be promptly discontinued.

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ADVERSE REACTIONS: In controlled clinical trials of patients with ichthyosis vulgaris, the most frequent adverse reactions in patients treated with Lac-Hydrin Cream were rash (including erythema and irritation) and burning/stinging. Each was reported in approximately 10-15% of patients. In addition, itching was reported in approximately 5% of patients.

In controlled clinical trials of patients with xerosis, the most frequent adverse reactions in patients treated with Lac-Hydrin Cream were transient burning, in about 3% of patients, stinging, dry skin and rash, each reported in approximately 2% of patients.

DOSAGE AND ADMINISTRATION: Apply to the affected areas and rub in thoroughly. Use twice daily or as directed by a physician.

HOW SUPPLIED: Lac-Hydrin Cream is available in cartons of 280 g (2-140 g plastic tubes). Store at controlled room temperature, 15-30°C (59-86°F).

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doomed intraocular lens implantation.

Enthusiasm for lens implantation was revived briefly when lenses that depended on iris fixation were designed. But this proved physiologically unsound and was abandoned. In December 1963 Binkhorst did an extracapsular extraction and inserted an iris-clip lens without the anterior loops. In 1968 Binkhorst and Choyce of London devised an improved lens implant of polymethylmethacrylate. Binkhorst pioneered and demonstrated the advantages of extracapsular surgery with a posterior chamber implant fixed with loops . The incidence of corneal edema, endothelial damage, and intraocular complications were reduced dramatically.

In Hawaii Gerald Faulkner MD introduced the Kelman phacoemulsification machine in 1971. Next year Drs Percival Chee and Wayne Wong successfully introduced the pupillary or iris-clip lens in a series of patients. In 1973, Faulkner combined his extracapsular extraction by phacoemulsification with the Binkhorst posterior chamber implant. The popularity and success of the posterior chamber lens has been dramatic in the last two decades. The anterior chamber lens is still used in special situations. The latest exciting development is the foldable silicone implant and sutureless cataract extraction.

Glaucoma Surgery

In 1941 considerable attention was given to acute glaucoma and the pupillary block mechanism influenced by the techniques of Otto and Hans Barkan of San Francisco. Nearly every ophthalmologist in Hawaii possessed a Koeppe or Barkan lens gonioscope and a portable Barkan binocular microscope. Curran, as early as 1920, and Otto Barkan in 1938, began to differentiate between open and closed angle glaucoma. In 1941, acute angle closure glaucoma was called acute congestive glaucoma, and the classical Graefe iridectomy was generally acknowledged as the only effective operation.

Limited access to proper medical care resulted in a high incidence of acute angle closure glaucomas progressing to chronic angle closure glaucomas or chronic congestive glaucomas. A limited number of basal iridectomies were performed for this latter condition with mostly unsatisfactory results. Iridosclerectomy of LaGrange, or an iris inclusion operation, was the best procedure.

Corneoscleral trephine was the operation of choice for medically refractory open angle glaucomas. A few preferred cyclodialysis. About 1950 Scheie's thermosclerec-tomy became the operation of choice for both refractory open angle and chronic angle closure glaucoma.

In 1968 John Cairns of England reported his results with trabe-culectomy, the first effective and safe surgical procedure for open angle glaucoma.[10] The procedure creates an opening into the anterior chamber under a scleral flap. The opening is extended from the limbus

to, the scleral spur and parts of the cornea, trabeculae, and sclera are removed. It is now the most popular surgery worldwide for glaucoma. Trabeculectomy is also the preferred procedure for uncontrolled chronic primary angle closure glaucoma and for acute angle closure glaucoma when iridectomy is considered inadequate. The procedure was established in Hawaii in 1971 by Drs Herbert Pang, Chee, Thomas Frissell, and Sugiki.

Trabeculectomy is the prime surgical procedure for medically refractory open angle glaucoma. Laser trabeculoplasty on occasion will circumvent trabeculectomy while Neo-YAG cyclophotoablation is considered a last resort.

Retinal Surgery

In 1941, retinal separation, retinal holes and tears, and retinal disinsertion were treated with the Walker diathermy and micro-pins. Lack of proficiency and inability to localize peripheral tears limited the success of this procedure before development of the indirect ophthalmoscope and the Goldmann contact lens in 1950. The scleral buckle was first used in Hawaii by Herbert Pang in 1962. Scleral buckling for repair of retinal detachment (particularly when there is subretinal fluid) and for retinal tears (when there is persistent vitreous traction), involves the creation of an indentation of the sclera toward the vitreous. This provides apposition of the sclera and the detached retinal parts allowing healing of the retinal tear without surgical entry into the globe. Absorbable materials such as facia lata, human donor sclera, and gelatin were used formerly, but now, nonabsorbable materials such as silicone rubber and silicone sponge are used more often. Cryotherapy or laser surgery is used in the treatment of retinal tears when there is no fluid accumulation. New techniques in vitreous and macular surgery offer new hope. The arrival of retinal fellowship-trained Drs Donald Sroat, Worldster Lee, John Drouilhet, Gregg Kokame, Pierre Pang, Byron Wong and Vernon Wong has elevated the status of retinal surgery in Hawaii to the level of academic centers.

Corneal and Refractive Surgery

Dr Thomas Frissell performed the first successful corneal transplant in 1956. The first-fellowship-trained cornea specialist, Dr Gilbert Yamamoto, arrived in 1979. With the help of the late Dr Kent Bennett at Straub, Yamamoto transformed the Makana Foundation tissue procurement system into today's Hawaii Lions Eyebank (which is sponsored and funded by the District 50 Hawaii Lions Club). The Eyebank can now network with mainland tissue banks and process local tissue for distribution. Approximately 120 to 140 keratoplasties are performed each year. As of 1995, 1,300 corneal transplants have been performed since the inception of the Eyebank in 1980. Now there are several more fellowship-trained cornea specialists in Hawaii, viz Lloyd Minaai, Rhodes Stevens, Steven Gee, and John Olkowsky. With the advent of high technology refractive centers, patients can seek PRK (photorefractive keratectomy), ALK (automated lamellar keratoplasty), PTK (phototherapeutic keratotomy), and soon, LASIK (laser-assisted in-situ keratomileusis) for correction of nearsightedness, astigmatism, and corneal scarring.

Oculoplastic and Reconstructive Surgery

Vernon Jim, who retired in 1992 was board-certified in both plastic surgery and ophthalmology, pioneered this field. Jorge Camara arrived in Hawaii in 1982 after a fellowship at Baylor College of Medicine in oculoplastic and reconstructive surgery.

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Scott Kortvelesy trained in neuroophthalmology has made contributions in orbital surgery. Carl Minatoya and Steven Sameshima have distinguished themselves in ophthalmic plastic surgery.

Retinopathy of Prematurity

One of the first cases of retrolental fibroplasia was documented in Hawaii in late 1941. In 1942, T.L. Terry of Boston[11] reported cases of premature infants with gray-white opacities behind their lenses. The incidence of retrolental membranes increased alarmingly. In 1950, Gordon of Colorado suggested the high concentration of oxygen given the infants as the cause. In 1977, retinopathy of prematurity was reported in 50 percent of infants weighing less than 1500 grams. This incidence has been reduced dramatically by careful monitoring of oxygen concentration in infant incubators.

Xenon Arc Photo Coagulator, Cryosurgical, and Lasers

Diathermy was formerly used to produce chorioretinal adhesions around retinal breaks. In 1946 Meyer-Schwickerath began experimenting with sunlight as the energy source to produce chorioretinal burns. A commercial photocoagulator was subsequently developed which produced light radiation by passing electrical current through gas. This instrument, the Xenon Arc Photocoagulator, was the highlight of the International Congress of Ophthalmology exhibit in Brussels in 1958. In 1965 Harry Cooke donated this equipment to St. Francis Hospital where it was used extensively by Drs Herbert Pang and Frissell for retinal detachments and at least on one case of bilateral retinoblastoma with excellent results.

Cryosurgical units operate on the Joule-Thompson principle that temperature drops when pressurized gas is forced through a narrow aperture. Cryosurgery was first used for cataract extraction in 1965 by Sugiki. It is the preferred instrumentation for retinal breaks and intraocular tumors.

Light amplification by simulated emission of radiation (laser) was first described in 1960. Investigations into laser light iridectomies were begun immediately. The first laser available, the pulsed ruby, failed in iridectomies. Improvements in performance started an investigative furor in the mid-1970s. The success of these investigations has made the argon laser iridectomy the procedure of choice.

Argon laser first became available in 1980. Argon laser photocoagulation has a high degree of effectiveness and applicability. It is the current treatment for certain stages of diabetic retinopathy. It is used for laser trabeculoplasty. It is the preferred method of prophylaxis for lattice degeneration, cystic retinal tufts, degenerative retinoschisis, and retinal breaks. In many cases, of retinal breaks transconjunctival cryotherapy for retinal breaks is preferred, especially for eyes with cloudy media.

Use of the Neodymium YAG laser (neodymium yttrrium-aluminum-garnet) is classified as photodisruptive surgery. It was developed in 1984 and became available in Hawaii the same year. The most widespread application of this laser technology is in sectioning the posterior capsule of the aphakic eye.

Conclusion

Ophthalmology has been transformed into a specialty of supreme sophistication. The metamorphosis from the ancient surgical art of cataract couching to a precise and skilled discipline has been driven by the revolution in instrumentation and technology. Hawaii is fortunate to have benefited from a constant and unrelenting flow of ophthalmologists who have been trained in the most current techniques and their contributions to health care in Hawaii is simply outstanding.

Acknowledgements

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Editorial

Continued from Page 224

- **1994 - Dr Robert Michael Blaese**, Deputy Chief, Metabolism
- **1995 - Flossie Wong-Staal, PhD**, Florence Riford Chair in AIDS Research, Professor of Medicine & Biology, University of California, San Diego.

The Blue Ribbon Panel on Living and Dying with Dignity

The Governor's Blue Ribbon Panel on Living and Dying with Dignity has been meeting since January, and plans to hold public hearings around the State in October to hear from Hawaii residents. The 18-member panel has been studying more than just physician-assisted death, and has looked at issues of pain management and palliative care, financial costs of dying, hospice, legal concerns including whether advance directives are being followed, spiritual and religious aspects, cultural differences and perspectives from various special interest groups. After the public hearings, the panel will develop policy and program recommendations. Prior to presenting these recommendations to the Governor, the panel will hold additional public hearings.

The panel has just published its first newsletter, and persons wanting to be included on the mailing list for that newsletter should contact the Executive Office on Aging at 586-0100. The specific dates and times for the public hearings will be soon available.

Glaucoma

Shigemi Sugiki MD

Glaucoma is the second leading cause of blindness in the United States and the leading cause of blindness in African Americans. Early detection and treatment can prevent blindness.

Glaucoma as we understand it today represents a group of disease entities which have as a final common pathway damage to the optic nerve and as a consequence, visual field loss. These changes can result in blindness. Traditionally, the glaucomas were classified simply as primary, secondary, combined or congenital. However, it is now clear that glaucoma is a much more complicated disease.

In recent years, the study of molecular genetics have opened new areas of understanding glaucoma. Juvenile open angle glaucoma, primary infantile glaucoma and other developmental glaucomas have been determined to have a molecular basis. With increasing knowledge in these areas, the classification of the glaucomas will be partially based on the findings of the defective gene or gene products. Primary open angle glaucoma, the most common form of glaucoma, may eventually be subdivided genotypically into many different diseases.[1] In these cases, gene therapy may offer a new treatment modality.

Glaucoma is the second leading cause of blindness in the United States and the leading cause of blindness in African Americans. The most common form of glaucoma, primary open angle glaucoma, is a major health problem with 2 million Americans having this disease. Half of these Americans may not be aware that they have this disease.[2] More than 7 million office visits occur per year with the primary diagnosis to monitor patients with glaucoma and patients at risk for developing glaucoma.[3] About 80,000 Americans are legally blind from glaucoma and many more have severe visual impairment.

Primary open angle glaucoma accounts for 70% of the glaucoma cases in the United States.[4] Important risk factors include the level of intraocular pressure, race and age. The prevalence of primary open angle glaucoma increases with increasing intraocular pressure. Primate studies and observations in angle closure and secondary glaucomas provide good evidence that elevated intraocular pressure can lead to optic nerve damage. However, significant individual variation exists in correlating the optic neuropathy and intraocular pressure. Studies show only one-tenth or less of those with elevated intraocular pressure have glaucomatous field loss.[5] About one-sixth of patients with glaucomatous optic nerve damage with field loss have less than 21 mmHg intraocular pressure even after repeated measurements.

Several factors may cause the progressive optic neuropathy of primary open angle glaucoma besides the intraocular pressure but the intraocular pressure is treatable and therefore treatments have included medications, laser surgery or other surgical treatments. This is a reasonable approach to therapy for this condition because progressive field defects occur in patients with higher intraocular pressures.[6]

African Americans have a prevalence of 4 to 5 times greater than other races, making race an important risk factor in primary open angle glaucoma. Compared to Caucasian Americans, blindness due to glaucoma is 4 to 8 times greater in African Americans.[2] Japanese appear to have a higher prevalence of low tension glaucoma.

Age is another important risk factor for primary open angle glaucoma. The Baltimore Eye Survey demonstrated this. African Americans 80 years or older have a prevalence exceeding 11%.

Family history of glaucoma is a risk factor. The risk of developing glaucoma is at least 3 times greater in patients who have a sibling with primary open angle glaucoma.

Other risk factors which have not shown consistency include cardiovascular disease, hypertension, diabetes and myopia.[7]

Besides measuring intraocular pressures, screening of patients for primary open angle glaucoma must include an assessment of the optic nerve status. This can be done by direct observation of the optic nerve or nerve fiber layer or by an analysis of the visual fields. Visual field defects may not be noted until one-third or more of the optic nerve fibers have been destroyed. Glaucoma can be suspected if the intraocular pressure exceeds 21 mmHg or the vertical cup/disc ratio of the optic nerve head is greater than 0.5. Intraocular pressure measurement alone cannot be relied on to make the diagnosis of primary open angle glaucoma. Therefore, probably the more efficient way to detect and diagnose primary open angle glaucoma is a routine periodic comprehensive eye examination.[3]

The examination for glaucoma must include the family history, ocular history and systemic disease history. A history of prior eye injury or diseases may give clues to the etiology of the glaucoma. A strong family history might suggest a genetic link while the presence of some systemic diseases like pseudoexfoliation syndrome might correlate with the presence of glaucoma.

The ocular examination must include the recording of visual acuity. The pupillary responses must be checked for any afferent pupillary defect. A Goldmann type applanation tonometer is preferable to measure the intraocular pressure. The time of the pressure measurement should be recorded as diurnal variations may influence the pressure measurements. Sometimes diurnal measurements may be necessary in those cases where the severity of the optic nerve damage does not correlate with the normal or less than normal intraocular pressure.

The slit lamp examination of the anterior ocular segments, gonioscopy to determine open or narrow angle, optic disc and nerve fiber layer evaluation and fundus examination are part of the glaucoma evaluation. (Fig. 1) The optic nerve appearance can be described but photographs of the optic nerve head and if available, stereophotography, are preferred methods of documenting the optic nerve head.

Fig 1.—Aqueous Flow

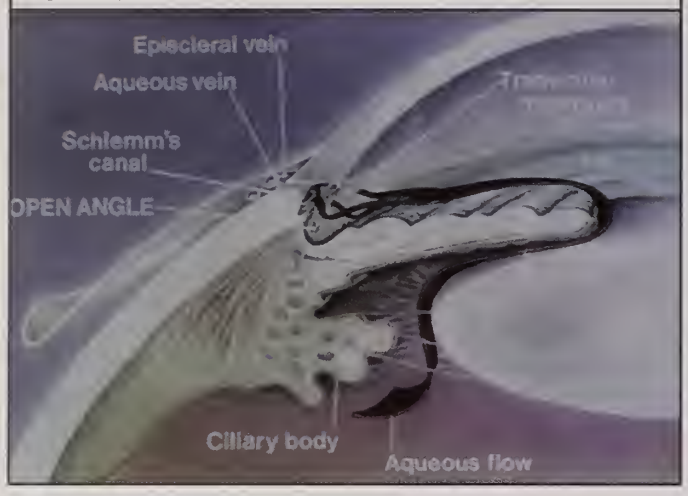


Fig. 2—Cupping of the Optic Nerve

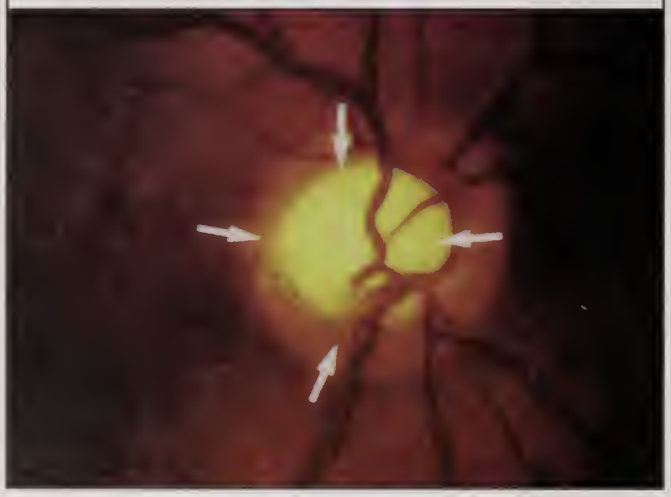


Fig. 3—Acute Glaucoma



(Fig. 2) When photography is unavailable, a careful drawing of the optic nerve head is appropriate.[8]

The examination of the fundus may reveal information that could explain certain visual field defects. Automatic static threshold techniques are useful methods to record reproducible defects in the fields of vision.

Arcuate scotoma typically is formed in advanced glaucoma. Since primary open angle glaucoma is a chronic and often, asymptomatic disease, noncompliance in the use of medications may have a significant impact on the glaucoma control.[9] Medications are expensive and often produce significant side effects and even can cause death. Medications include epinephrine, miotics, beta blockers, alpha agonists, carbonic anhydrase inhibitors, and prostaglandins. Marijuana may reduce intraocular pressure but it is not more effective than the available medications. It may also have significant side effects.

Other treatment modalities include laser therapy and glaucoma surgery. The most commonly used filtering operation is trabeculectomy which creates a fistula to allow the aqueous to leave the eye. In complicated cases, posterior tube shunts are inserted into the eye to drain the aqueous. Antifibrosis agents like 5-fluorouracil or Mitomycin-C can often improve the success rates in glaucoma filtering operations. When treatment modalities have failed, cyclodestructive procedures that destroy the ciliary body and its processes may be utilized. Laser or cryosurgery is available for cyclodestruction.

The life-styles of glaucoma patients can be seriously affected. Peer support can be helpful and constant encouragement is necessary for patients taking medications for a generally asymptomatic disease. Because of possible systemic side effects, other health care providers must have knowledge of the glaucoma medications being used. Life-style areas which can be affected may include loss of independence, hobbies, sports, financial, sexuality, reading, driving and job loss.

Angle closure glaucoma accounts for 10% of glaucoma cases in the United States. Predisposing factors include persons with anatomically narrow angles as determined by gonioscopy. Hyperopia, Asians and Eskimos, the elderly, women and a family history of this condition are other predisposing factors.[4] The patient may present with a painful red eye, nausea, vomiting, blurred vision and seeing halos around lights. The cornea is hazy due to edema and the pupil is semidilated. Gonioscopy will reveal the closed angle and the intraocular pressure will be greatly elevated. (Fig. 3)

Angle closure glaucoma requires emergency treatment which may include topical, oral and intravenous medications. After the pressure is stabilized, a peripheral iridotomy with laser is done. Because there may be a 78% chance of the unaffected eye developing acute glaucoma, a prophylactic laser iridotomy is done on the unaffected eye.[10]

Glaucomas with related ocular conditions are termed secondary glaucomas. These include trauma, uveitis, diabetic retinopathy, vein occlusions and long term use of steroids.[11] Retinal ischemia as a result of diabetic retinopathy or occlusive disease may result in new blood vessels growing into and obstructing the trabecular meshwork. This can result in neovascular glaucoma, a difficult glaucoma to treat. Ocular developmental abnormalities can lead to congenital and infantile glaucoma. In this group, symptoms can

include corneal enlargement, epiphora, photophobia, blepharospasm, and corneal edema. The preferred treatment in congenital and infantile glaucoma is surgery. Medical management usually has a limited long-term value.

In summary, glaucoma is a unique ophthalmic disease. Before treatment, the patient may have been totally asymptomatic. Major effects on the quality of life can occur once therapy is initiated. Medical therapy may be life long but untreated, the disease in its natural course may result in blindness. Surgery can be offered to patients if the disease progresses and the patient becomes intolerant to medications. An ongoing assessment of the quality of life is an essential portion of the management of the glaucoma patient.

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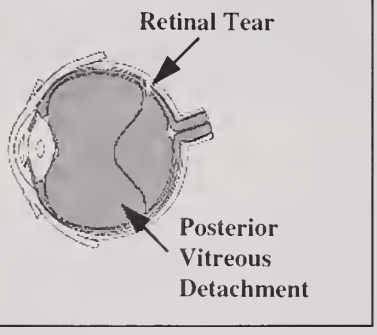
John H. Drouilhet MD

With age the vitreous gel in the vitreous cavity degenerates. The gel is a combination of viscous hyaluronic acid and collagen fibrils. The collagen fibrils are in greatest number adjacent to the retina. The fibrils are more firmly attached to the retina over the optic nerve, macula, retinal vessels, and at he anterior insertion of the retina. As the gel degenerates and liquefies, the collagen fibrils pull away from the retina. This separation of the gel from the retina is known as Posterior Vitreous Detachment (PVD).

The mechanical pulling away of the gel from the retina stimulates the retina and produces light flashes (photopsias). As the collagen fibrils separate from the retina they become visible to the patient and are seen as floaters. Floaters have a variety of appearances to include cobwebs, strings, rings, "bugs", and dots. Usually seeing hundreds of black dots represents bleeding in the eye from either a tom retina or blood vessel.

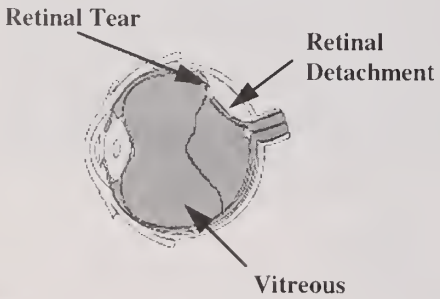
Although flashes and floaters are usually of no long-term visual consequence, they can be the first sign of retinal tears or retinal detachment. The retina is a delicate structure. Because the vitreous is attached to the retina, it is possible for the vitreous gel to tear the retina (Fig. 1) when it physically pulls away from it during Posterior Vitreous Detachment or PVD.

Fig. 1



Retinal holes or tears can lead to separation of the retina from the inside wall of the eye producing a retinal detachment (Fig. 2). When the retina detaches, it separates from part of its nutritional supply coming from the choroidal layer of blood vessels in the wall of the eye. The patient usually first notices loss of peripheral vision. If the retina detaches to include the macula, the patient loses reading (central) vision.

Fig. 2



Everyone will develop a Posterior Vitreous Detachment if they live long enough - usually by 60 to 70 years of age. The prevalence of retinal breaks in U.S. adults is 4-8% based on clinical and autopsy reviews. Not all retinal tears lead to retinal detachments. The incidence of retinal detachments in the general population is 1:10,000. This risk increases to 1:100 to 3:100 after cataract surgery and after YAG laser capsulotomy for secondary cataracts. Near sighted patients are more prone to retinal tears and detachment.[1]

New symptomatic retinal tears with minimal surrounding retinal detachment are usually operated with cryo or laser surgery.[2] This produces an adhesion between the retina and the wall of the eye. This acts like a spot weld to prevent retinal detachment.

However, if a retinal detachment occurs, laser and/or cryo surgery will not be work effectively to restore peripheral vision. Other surgical modalities include pneumatic retinopexy, scleral buckle, and vitrectomy surgery.

Pneumatic Retinopexy was first popularized in 1986.[3] The retinal tears have to be located above the 8:00 to 4:00 meridians of the eye (think of a clock face). A gas bubble is injected into the vitreous cavity. The patient's head is positioned so that the bubble rises in the liquid vitreous to tamponade the retinal tear. Then either cryosurgery or laser surgery is used to surround the tear or tears. The patient maintains the specified head position with the gas bubble against the tear for several days until the adhesion biologically glues the retina to the wall of the eye. The eye has a pump mechanism that removes fluid from between the retina and wall of the eye as long as the gas bubble plugs the tear from inside the eye. The long-term success rate of only this operation (73%) is not quite as good as performing a scleral buckle as the initial procedure (82%). However, the combined success rate of Pneumatic Retinopexy and Seleral Buckle is equal to doing an initial Scleral Buckle. The Pneumatic Retinopexy operation offers the advantages of it being an office procedure and having less morbidity with a slightly better visual acuity result as compared to a Scleral Buckle operation.[4]

A Scleral Buckle operation is used for more severe retinal detachments and inferiorly located retinal tears. This is an Outpatient Operating Room procedure. The eyeball is exposed. All retinal tears are localized and receive cryosurgery. A silicone band is placed over the tears such as to indent the wall of the eye to approximate it to seal the retinal tears.[5] This succeeds in 85-95% of uncomplicated primary retinal detachments.

Vitrectomy surgery is reserved for detachments accompanied by vitreous hemorrhage that prevents seeing into the eye appropriately, detachments from tears in the far back portion of the eye, and for detachments associated with significant scar tissue growth on the

retina known as Proliferative Vitreoretinopathy (PVR). The vitreous is removed and scar tissue is excised from the retinal surface. The fluid in the vitreous cavity is replaced with a gas bubble that pushes the detached retina against the wall of the eye. Laser surgery surrounds the retinal tears. A scleral buckle helps to seal the tears also. The patient is then placed in a face down position for two to five weeks until aqueous humor gradually the gas bubble. A few patients require silicone oil as a long acting vitreous substitute.[6] Intraoperative perfluorocarbon liquids are also now used as a mechanical liquid tool in selected PVR cases and giant retinal tears.[7] This has dramatically improved surgical ability in these more difficult detachments. With these modalities ophthalmologists in Hawaii can care for all patients with even the most difficult retinal detachments.

Overall, retinal detachment surgery has a 90-95% successful reattachment rate with one or more operations. Unfortunately, final visual acuity cannot be predicted. If the macula is detached, reading vision may never return to normal. New flashes and floater symptoms demand proper examination. It is much better to operate a retinal tear before it has progressed to a detachment with loss of vision.

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Retinopathy of Prematurity

John H. Drouilhet MD

Retinopathy of Prematurity (ROP) is a disorder of altered retinal vasculature occurring in low birthweight infants (1250 grams or less). These vascular abnormalities evolve over time and may progress through stages. ROP may result in permanent visual disability or blindness.[1]

The Committee for the Classification of ROP identified the five basic stages of vascular and retinal abnormalities.[2] Embryologically the retinal vasculature begins at the optic nerve and grows anteriorly in the retina toward the ora serrata, the anterior insertion of the retina. The geographic growth of the retinal vasculature is divided into Zones. Zone 1 is twice the distance of the radius beginning from the optic nerve extending to the macula. Zone 2 is the radius from the optic nerve extending to the nasal ora serrata. Zone 3 extends from the anterior border temporally of Zone 2 to the temporal ora serrata. The vascular abnormalities are classified by Stages. Stage 1 ROP shows terminal vascular arborization with a terminal line (whitish-gray thread-like line) separating vascularized from avascular retina. In Stage 2 ROP the line becomes a ridge with definite thickness and broadness. In Stage 3 there is fibrovascular proliferation along the surface of the retina and into the vitreous. If the vessels exiting the optic nerve are tortuous and dilated this is known as "Plus" Disease. Stage 4a is partial retinal detachment not involving the macula whereas Stage 4b involves the macula. Stage 5 is total retinal detachment of the vascularized retina. This results in a funnel-shaped detachment.[3] Of premature infants weighing less than 1250 gm at birth 25.2% develop Stage 1, 21.7% develop Stage 2, and 18.3% develop Stage 3.[4] "Plus" disease can progress through Stage 1 and 2 quickly thus necessitating frequent ocular exams in the neonatal ICU. Although most ROP regresses, it can exacerbate thus requiring continued monitoring until full vascularization of the retina.

The Japanese report on regression of ROP following ablation of the peripheral avascular retina prompted a prospective randomized clinical trial comparing observation alone to cryoablation.[5,6] The eyes reaching Threshold for surgery had "Plus" disease with five continuous hours or eight total clock hours with Stage 3 in Zone 1 or 2. The operated eyes had a 31.1% unfavorable result compared to 51.4% in the control group.

With the advent of better laser surgery delivery systems, it became possible to ablate the peripheral avascular retina with laser surgery. A prospective randomized study was not feasible. The Laser-ROP Study Group combined three large laser studies and determined equal efficacy to cryosurgery.[7] There is indication that laser surgery for Threshold Disease in Zone 1 may have better result than cryosurgery. Laser surgery carries significantly less morbidity than cryosurgery. Hawaii has had laser capability for ROP disease for some time. This significantly reduces the risk of Threshold ROP progressing to retinal detachment.

Those eyes progressing to retinal detachment can be operated with scleral buckle operation. Scleral buckle reduces progression from Stage 4 to Stage 5 ROP.[8] Vitrectomy surgery can help in severe Stage 5 ROP although the visual result has not been very gratifying. Much work needs to be done to obtain better vision results in these advanced cases and to prevent progression to this level..

With new technical and pharmacological advances the low birthweight infant is increasingly surviving and we need to be watchful for the incidence of ROP is increasing.[9] Newer research initiatives continue to look for ways to prevent or resolve ROP to reduce vision loss. Animal studies show that too much oxygen given shortly after birth causes ROP.[10] However, animal studies also demonstrate that too little oxygen later can make ROP worse if it already exists.[11] The STOP-ROP Study (Supplemental Therapeutic Oxygen for Prethreshold), funded by the NIH, is registering infants with marginal arterial oxygenation and "Prethreshold" ROP disease. Kapiolani Medical Center for Women and Children is one of the clinical trial centers. This study will determine if supplemental oxygen will reduce the number of infant eyes progressing to Threshold ROP. STOP-ROP is also examining the effects of supplemental oxygen on infant growth rate, pulmonary disease, and length of stay. Hopefully, this study will definitively answer the question as to the role of Oxygen administration in the development of ROP.

Retinopathy of Prematurity requires ongoing research to determine its multifactorial causes and the best ways to prevent and halt its potentially devastating end result of blindness.

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Diabetic Retinopathy

John H. Drouilhet MD

Diabetic Retinopathy is the leading cause of new blindness in the 25 to 74 year age group in the United States. The diabetic patient has a twenty-five times greater risk of developing blindness than the non-diabetic patient. Only 50 % of all patients with diabetes mellitus have actually been diagnosed.[1] The Community Epidemiologic Work Group for Diabetes Mellitus in Hawaii showed a prevalence of 25.2 per 1000 to 63 per 1000 persons based on self-reported data. The State Blind Registry for 1992-1993 showed diabetic retinopathy as the second leading cause of all new blind cases (20.9%).[2] Diabetic retinopathy is a significant cause for concern in Hawaii in regard to patient quality of life and socioeconomic concerns.

Various factors have been studied in the pathophysiology of Diabetic Retinopathy to include aldose reductase, growth hormone, blood rheology abnormalities, blood viscosity,[1] vascular endothelial growth factor,[3] etc. It is as yet not fully understood how much each of these (or other unknown factors) contributes to the retinal vascular disease process.

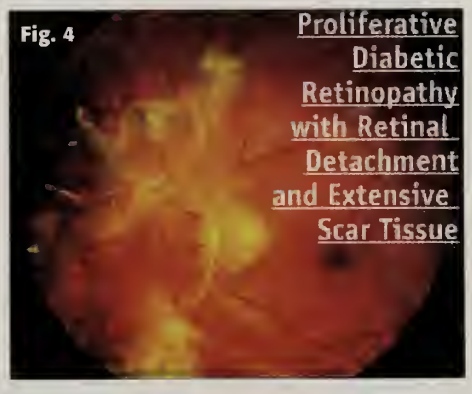
Duration of diabetes mellitus is critical relative to the onset of retinopathy. Type I diabetics usually have no retinopathy until five years after diagnosis. By 15 years into the disease 90% will have retinopathy. Type II diabetics can present with retinopathy on initial diagnosis. The recommendation for dilated eye examination in the Type I diabetic is yearly once the patient has had diabetes for five years. Type II diabetics should be examined yearly from time of diagnosis.[1]

Definite risk factors for diabetic retinopathy include duration of disease, poor glucose control, hypertension, and renal disease.[4] As 87% of patients with advanced retinopathy have nephropathy and/or neuropathy, patients with nephropathy and /or neuropathy definitely need an ophthalmologic exam.[5]

Diabetic Retinopathy has two major classifications—Non-Proliferative Diabetic Retinopathy (NPDR) and Proliferative Diabetic Retinopathy (PDR).[1] In NPDR one sees retinal microaneurysms, blot hemorrhages, cotton wool spots, intraretinal microvascular abnormalities, and retinal edema (Fig 1). Edema affecting the macula causes loss of central (reading) vision. PDR is the more advanced stage occurring when the retina starts to lose its blood supply. The eye responds by growing new blood vessels on the optic nerve or retina (Fig 2). These fragile new vessels bleed, filling the vitreous cavity. Scar tissue accompanies the neovascularization and can cause retinal detachment (Fig 3).

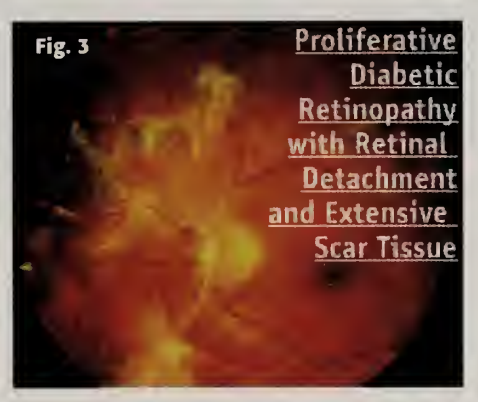
To combat Diabetic Retinopathy, surgical strategies were developed in which Laser surgery treats macular edema and causes atrophy of the neovascularization. Vitrectomy surgery removes















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After the diagnosis of pseudomembranous colitis has been established, therapeutic measures should be initiated. Mild cases of pseudomembranous colitis usually respond to drug discontinuation alone. In moderate to severe cases, consideration should be given to management with fluids and electrolytes, protein supplementation and treatment with an antibacterial drug clinically effective against C. difficile colitis.

PRECAUTIONS
General: For topical use only; not for ophthalmic use. Concomitant topical acne therapy should be used with caution because a possible cumulative irritancy effect may occur, especially with the use of peeling, desquamating or abrasive agents. If severe irritation develops, discontinue use and institute appropriate therapy.
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3. Patients should not use any other topical acne preparation unless otherwise directed by physician.
4. Patients should report to their physician any signs of local adverse reactions.
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Data from a study using mice known to be highly susceptible to cancer suggests that benzoyl peroxide acts as a tumor promoter. The clinical significance of this is unknown.
No animal studies have been performed to evaluate the carcinogenic and mutagenic potential or effects on fertility of topical erythromycin. However, long-term (2-year) oral studies in rats with erythromycin ethylsuccinate and erythromycin base did not provide evidence of tumorigenicity. There was no apparent effect on male or female fertility in rats fed erythromycin (base) at levels up to 0.25% of diet.
Pregnancy: Teratogenic Effects: Pregnancy CATEGORY C: Animal reproduction studies have not been conducted with BENZAMYCIN® Topical Gel or benzoyl peroxide.
There was no evidence of teratogenicity or any other adverse effect on reproduction in female rats fed erythromycin base (up to 0.25% diet) prior to and during mating, during gestation and through weaning of two successive litters.
There are no well-controlled trials in pregnant women with BENZAMYCIN® Topical Gel. It also is not known whether BENZAMYCIN® Topical Gel can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. BENZAMYCIN® Topical Gel should be given to a pregnant woman only if clearly needed.

Nursing Women: It is not known whether BENZAMYCIN® Topical Gel is excreted in human milk after topical application. However, erythromycin is excreted in human milk following oral and parenteral erythromycin administration. Therefore, caution should be exercised when erythromycin is administered to a nursing woman.

Pediatric Use: Safety and effectiveness of this product in pediatric patients below the age of 12 have not been established.

ADVERSE REACTIONS
In controlled clinical trials, the total incidence of adverse reactions associated with the use of BENZAMYCIN® Topical Gel was approximately 3%. These were dryness and urticarial reaction.
The following additional local adverse reactions have been reported occasionally: irritation of the skin including peeling, itching, burning sensation, erythema, inflammation of the face, eyes and nose, and irritation of the eyes. Skin discoloration, oiliness and tenderness of the skin have also been reported.

OOSAGE AND ADMINISTRATION
BENZAMYCIN® TopMical Gel should be applied twice daily, morning and evening, or as directed by a physician, to affected areas after the skin is thoroughly washed, rinsed with warm water and gently patted dry.

Important to the Pharmacist
Prior to dispensing, tap vial until powder flows freely. Add indicated amount of ethyl alcohol (70%) to vial (to the mark) and immediately shake to completely dissolve erythromycin. Add this solution to gel and stir until homogeneous in appearance (1 to 1½ minutes). BENZAMYCIN® Topical Gel should then be stored under refrigeration. Do not freeze. Place a 3-month expiration date on the label.

NOTE: ***Prior to reconstitution, store at room temperature between 15° and 30°C (59° – 86°F).***
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Do not freeze. Keep tightly closed. Keep out of the reach of children.

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dense vitreous hemorrhage and relieves traction retinal detachment from scarring.

The Early Treatment Diabetic Retinopathy Study (ETDRS)[6] demonstrated a 50% reduction in loss of vision with appropriate laser surgery for clinically significant macular edema (Fig 4). This study also showed that aspirin did not reduce progression of diabetic retinopathy nor increase the risk of vision loss from vitreous hemorrhage.[7] The Diabetic Retinopathy Study showed a 50-60% reduction in vision loss for timely laser surgery in patients with Proliferative Diabetic Retinopathy (Fig 5).[8] The Diabetic Retinopathy Vitrectomy Study showed better visual result with early vitrectomy surgery in Type I Diabetics with nonclearing vitreous hemorrhage (Fig 6).[9]

The Diabetes Control and Complications Trial (DCCT) showed delay in onset and slower progression of Diabetic Retinopathy, nephropathy, and neuropathy. There was a 50% reduction in amount of laser surgery for Diabetic Retinopathy in tightly controlled diabetics.[10]

Diabetic Retinopathy is the major cause of new blindness in working Americans. The longer the duration of diabetes, the greater the risk of retinopathy. Excellent serum glucose, blood pressure, and cholesterol control11 delay and decrease the severity of retinopathy. Timely laser surgery reduces vision loss by 50%. It is the responsibility of all physicians in partnership to diagnose and properly manage the diabetic patient.

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Loss of Reading and Central Vision Due to Macular Diseases - Therapeutic Management, Advances and Limitations

Gregg T. Kokame MD*

Remarkable advances have recently developed in the management of macular diseases. There are now treatment options for diseases previously felt to be incurable, and for recovery of central vision for some of these patients. The macula is the central part of the retina (the nerve tissue lining the back of the eye). The macula provides for the fine and discriminating vision, needed for driving, reading and facial recognition. Thus, macular diseases result in loss of some of the most important visual tasks, ie. - the ability to read, the ability to drive, and the ability to recognize others. Vitreoretinal surgery is a rapidly changing subspecialty of ophthalmology, which has recently developed new approaches to macular diseases, such as macular holes, macular degeneration, and subretinal neovascularization. Research in Hawaii has contributed to these advances.

Macular Holes

Age-related macular holes are holes in the central part of the retina, resulting in a missing spot in the center of vision and in distortion of vision (metamorphopsia) (Fig. 1). Macular holes are more common in females and increase in frequency with age, especially after age 55. Prevalence has been estimated to be 3.3 per 1000 in people over 55. This disease was previously felt to be untreatable until 1991, when the first pilot series of vitreous surgery showed closure of the macular hole, sealing of the retinal separation and improvement of central vision (Fig. 2).[1] Marked improvements in surgical techniques have resulted in a significant increase in success rate from 58% in the initial reported series to over 90% in recent series, including series reported from the Retina Center at Pali Momi. To take a disease previously untreatable six years ago to a point of highly successful surgical management is truly a remarkable story in the field of vitreoretinal surgery.

The Retina Center at Pali Momi, (a division of Kapiolani Medical Center at Pali Momi), is one of 15 study centers around the nation participating in the randomized national multi-centered trials on macular hole surgery (The Vitrectomy for Prevention of Macular Hole Study[2,3] and The Vitrectomy for Macular Hole Study).[4-6] These studies have resulted in significant contributions to the literature and represent the only well-controlled randomized studies on macular hole surgery. The Retina Center at Pali Momi is studying the use of serum growth factors to stimulate higher macular hole closure rate and vitrectomy with an intraocular gas bubble to prevent macular hole development in early stages of this disease.[3] In previously published studies ultrasonographic techniques were utilized to demonstrate tangential traction within the vitreous gel causing macular holes[7], and macular hole surgery was shown to allow patients even with chronic macular holes of many years in duration to recover useful central vision following surgery.[8]

Age-Related Macular Degeneration

Age-related macular degeneration (AMD) is a degenerative disease of the central retina, which results in a gradual scarring of support tissues. AMD is the most common causes of reportable blindness in the United States, as well as here in Hawaii. It is most common in Caucasians, especially fair and blue-eyed individuals, and less common, although not infrequently seen in Asians. Presently, preventative treatment is not proven, but studies on mineral, antioxidant, and vitamins supplements are ongoing. Laser treatment in the early stages of the disease is being studied in randomized trials.

AMD has two categories - the dry form and the wet form. The mainstay of treatment is laser surgery for the wet form which is the most common cause of severe vision loss. In the dry form there is gradual scarring with slow and gradual vision loss. In the wet form, choroidal neovascular membranes (CNVM) rapidly proliferate causing bleeding, scarring and leaking and rapid vision loss (Fig. 3). Laser treatment to obliterate the CNVM has been shown in large national multi-centered trials to decrease the risk of further vision loss.[10-11] A fluorescein angiogram (office procedure) is used to visualize the extent of CNVM (Fig. 3). Fluorescein dye is injected into an arm vein and an ophthalmic fundus camera with specific filters for the fluorescent light visualizes the dye in the retinal vessels.

*Clinical Professor of Surgery
Division of Ophthalmology
Department of Surgery
University of Hawaii School of Medicine
Medical Director, The Retina Center at
Pali Momi, Kapiolani Medical Center
at Pali Momi, Aiea, Hawaii.

Reprint requests to:
Gregg T. Kokame, MD
321 N. Kuakini Street
Suite 307
Honolulu, Hawaii 96817

Fig 1.— Photograph of macular hole in left eye. Note visible hole approximately 800 um in size in center of macula. Visual acuity is 20/200.



Fig. 2.—Postoperative photograph following macular hole surgery. Note that macular hole has sealed. Visual acuity is 20/40.

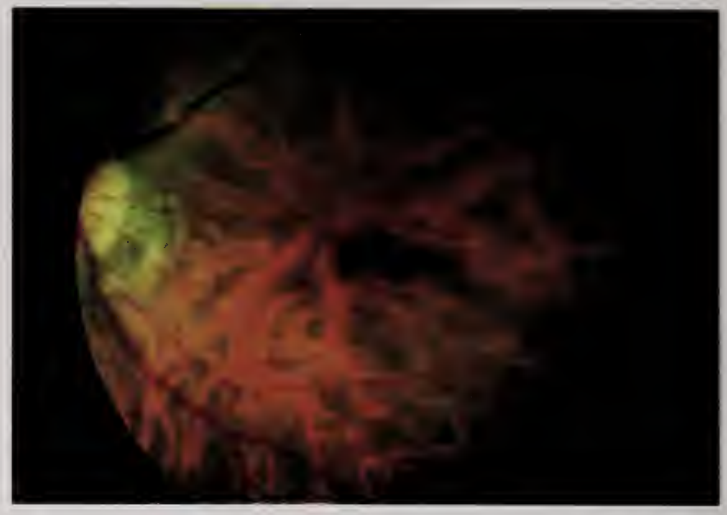


Fig. 3.—Fluorescein angiogram of retinal pigment epithelial detachment (RPED) or blister-like formation in pigment epithelium due to subretinal neovascularization and AMD. Note bright spot at superonasal edge of blister consistent with SRNVM, but partially obscured by fluorescence within the RPED.

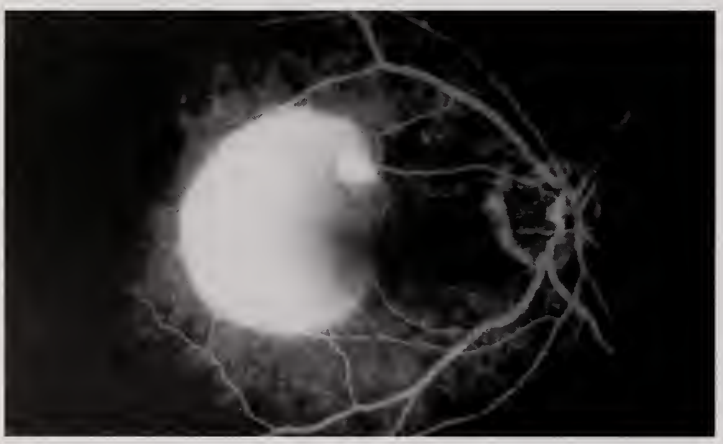


Fig. 4.—ICG angiogram demonstrating bright, focal area of hyperfluorescence consistent with SRNVM in same eye as in Figure 3. Note absence of fluorescence obscuring SRNVM within the RPED.

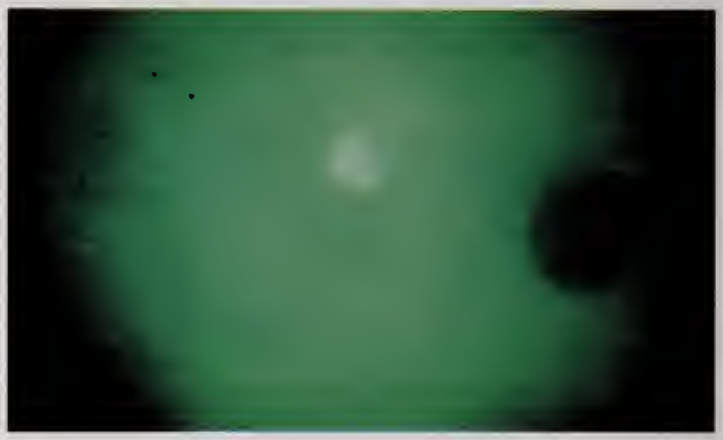


Fig. 5.—Photograph of SRNVM in patient with idiopathic inflammatory disease of retina, called punctate inner choroidopathy. Note the grey subretinal lesion extending into central fovea, as well as serous retinal detachment. Visual acuity is 20/200.

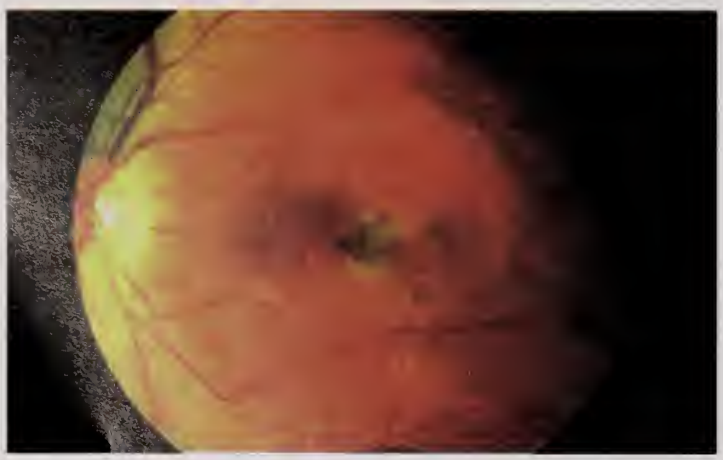
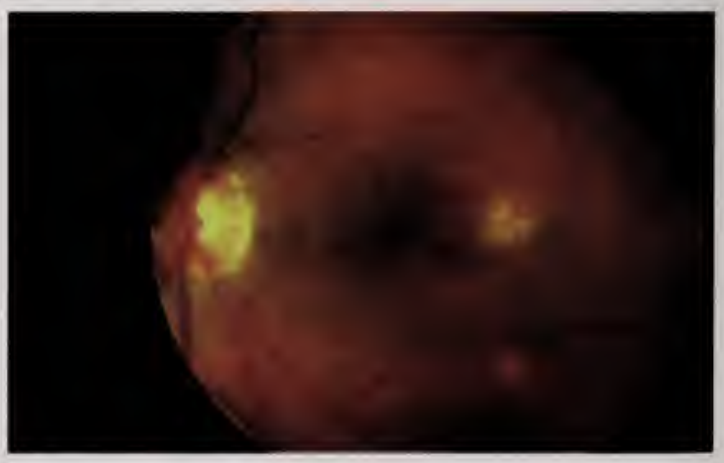


Fig. 6.—Postoperative photograph following subretinal surgery to remove SRNVM showing focal hypopigmented scar in temporal macula. Note absence of grey membrane and serous retinal detachment. Visual acuity has improved to 20/30.



The images are captured on film or on digital camera with computer interface, and laser treatment can be guided to the area of CNVM. Unfortunately, the percentage of patients with the wet form treatable with fluorescein angiographic criteria is less than 15%. A new imaging technology utilizing indocyanine green (ICG) may allow more precise localization of CNVM in select cases (Fig. 4). This imaging technology uses digital imaging, because of the higher sensitivity of digital cameras or video cameras to the fluorescence of the ICG dye in the infrared range. This imaging technique has become available in Hawaii for just over a year. With further experience and research with this modality, more patients may become eligible for laser surgery, although we have often found the two imaging modalities are complimentary. For patients not treatable with laser surgery, the prognosis for central vision is poor, although the majority of patients will have normal peripheral vision. Ongoing studies are evaluating medical treatments of CNVM by anti-angiogenic modalities, such as oral thalidomide, vascular endothelial growth factor antibodies, and radiation therapy.

Choroidal neovascular membrances (CNVM) are abnormal blood vessels growing into the subretinal space through retinal pigment epithelium. The most common disease is AMD, but there are other entities, which cause retinal scars and CNVM ingrowth. These include ocular histoplasmosis syndrome (a scarring disease associated with the fungus, Histoplasma capsulatum, common in the midwest), high myopia, angioid streaks (associated most commonly with pseudoxanthoma elasticum), trauma with choroidal ruptures, and multiple viral or idiopathic inflammatory diseases of the retina. Because CNVM is subretinal under the nerve tissue thus limiting surgical access, surgical removal was not considered until the first successful surgical series of CNVM removal through a small retinotomy in 1991.[12] Subretinal surgery has since develeped remarkably with improved techniques and instrumentation. Most promising visual results have been in patients with ocular histoplasmosis or idiopathic causes (Figs 5-6).[13] The initial results of surgical removal of CNVM in AMD were dissappointing, but research is ongoing, including exciting possible new treatment avenues of neuroretinal and retinal pigment epithelial cell transplantation. Subretinal surgery to remove hemorrhage using tissue plasminogen activator has successfully restored vision in subretinal hemorrhage due to retinal macroaneurysms and AMD.

Macular diseases cause loss of some of the most important visual abilities. Recent diagnostic, therapeutic and surgical advances have resulted in recovery of central vision for many patients with these diseases. Ongoing research has led to advances in this rapidly changing field, much occurring within this decade.

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Advances in Ophthalmic Plastic, Reconstructive and Orbital Surgery in Hawaii

Jorge G. Camara MD*

Advances in ophthalmic plastic and reconstructive surgery continue to be made in the state of Hawaii. A new technique of dacryocystorhinostomy using the endoscope and the pulsed Holmium: YAG laser as well as a subconjunctival endoscopic assisted approach to orbital surgery for orbital decompression is described. The integrated hydroxyapatite implant replacing the enucleated eye gives excellent postoperative extraocular motility.

History of Ophthalmic Plastic and Reconstructive Surgery

Ophthalmic plastic surgery is any surgery that changes the form of the adnexal tissues of the eye (from the Greek *ophthalmos*, meaning eye, and *plastos*, meaning formed). Thus, ophthalmic plastic surgery includes repair of eyelid malpositions), eyelid and orbital reconstruction, conjunctivoplasty, cosmetic blepharoplasty, lacrimal surgery, orbitotomy procedures, and the treatment of orbital socket deformities.[1]

Examples of ocular diseases treated by ophthalmic plastic and reconstructive surgeons are ptosis, eyelid malpositions such as entropion and ectropion, cancers of the eyelids and ocular surface, malignant exophthalmos, orbital tumors and blocked tear ducts.

Deformities of the orbital region from congenital defects, trauma, neoplasms, and/or infectious diseases have afflicted men throughout the ages. Prehistoric skeletal remains reveal deformities that did not cause death, but ocular disability. The oldest surviving reference to oculoplastic surgery is a passage from the Code of Hammurabi (2250 BC) that refers to treatment of an infected lacrimal sac:

> "If a physician performs on a patient a deep cut with the operating knife or if he opens with a knife an (abscess of cavity) and the eye is lost, the physician's hands shall be cut off."

*Chairman, Dept. of Ophthalmology
and Otolaryngology
St. Francis Medical Center
Clinical Assistant Professor
Division of Ophthalmology
University of Hawai School of Medicine

Correspondence to author:
Jorge G. Camara MD
2228 Liliha Street, Suite 106
Honolulu, Hawaii 96817

References to the surgical repair of entropion go as far back as Hippocrates (460-380 BC); the first century Roman philosopher Celsus (25 BC to 50 BC) believed that reconstruction of mutilated eyelids was hopeless.[2]

The development of modern day ophthalmic plastic and reconstructive surgery was started by Byron Smith, an ophthalmologist, and John Converse, a plastic surgeon, who met during World War II. They collaborated in the repair of ocular and adnexal injuries sustained by American soldiers, and described the diagnosis and treatment of complex naso-orbital fractures.[3] Subsequent work by Fox, Callahan, Hughes, and Beard contributed greatly to the development of this subspecialty.

Ophthalmic plastic and reconstructive surgery has evolved from these beginnings into a distinct discipline of ophthalmology. Fellowship training programs in ophthalmic plastic, lacrimal and orbital surgery ranging from one to two years are offered by most large training programs in the United States.

New techniques in laser lacrimal surgery for correcting nasolacrimal duct obstruction have been developed in Hawaii. Endoscopic assisted orbital surgery for removal of orbital tumors, repair of orbital fractures and orbital decompression for Graves' ophthalmopathy has been advanced in Hawaii. The first large long term study of the adjunctive use of Mitomycin C in endoscopic laser assisted dacryocystorhinostomy has been completed and submitted for publication.

Endoscopic Laser Assisted Dacryocystorhinostomy

Obstruction of the nasolacrimal drainage system may cause problems ranging from troublesome epiphora to chronic infection, and formation of a dacryopyocele with abscess formation. Because the medial angular veins drain into the cavernous sinus, these infections are considered to be a medical emergency requiring prompt treatment. (Fig. 1)

The time honored method of correcting a blocked tear duct is an external dacryocystorhinostomy which has an over 90% success rate.[5] This operation, however, does have disadvantages such as the skin incision between the bridge of the nose and the medial boundary of the eyelid; the potential for significant intraoperative bleeding from the medial angular vessels and nasal mucosa; postoperative pain requiring pain-suppressants, and the need for approximately a week of recovery time.

The use of the endoscope, with the pulsed high-powered Hol-

Fig 1.—Three year old female child with untreated congenital nasolacrimal duct obstruction forming lacrimal sac abscess.



Fig 2.—Intraoperative intranasal photograph of osteotomy with silicone stents in place immediately after endoscopic laser assisted dacryocystorhinostomy.



Fig 3.—Thirty six year old Hawaiian female with malignant exophthalmos and optic neuropathy causing severe visual loss in both eyes.



Fig 4.—Same patient after undergoing endoscopic assisted three wall orbital decompression to both eyes with recovery of visual acuity bilaterally.



Fig 5.—Nine year old male status post enucleation of both eyes due to retinoblastoma with severe orbital atrophy and socket contracture.



Fig 6.—Same patient after bilateral implantation of hydroxyapatite implants and fitting of ocular prosthesis.



mium: YAG laser (Coherent Medical Group, Palo Alto, California) has resulted in the evolution of intranasal endoscopic laser assisted dacryocystorhinostomy.[6] The advantages of this surgical approach are (1) the absence of a skin incision, (2) significantly less bleeding, due to the hemostatic properties of the laser, (3) less pain postoperatively due to the micro-invasive nature of the procedure, and (4) return to normal activities the day after surgery.

The procedure involves placing a lacrimal light pipe into the lacrimal sac, and using a videoendoscope attached to a monitor to visualize the junction of the lacrimal sac and the blocked nasolacrimal duct. A laser fiber, passed through a handpiece, is used to create a byspass osteotomy. Silicone stents are then placed through the osteotomy to keep the opening patent (Fig. 2).

The disadvantages of the procedure are the difficulty learning the procedure, and the cost of the laser and ancillary equipment. The societal benefit of earlier return to normal activities, and patient comfort outweigh these disadvantages. (Akin to the difference between laparoscopic and open cholecystectomy).

In our series of 250 operations performed in Hawaii, and a follow-up as long as 5 years, the overall success rate of the procedure is 95% as compared to a 90% success rate for external dacryocystorhinostomy.

Endoscopic Orbital Surgery

In the last decade, the use of the endoscope has become commonplace in orthopedic, general, obstetrical, urological, otolaryngological, thoracic and plastic surgery. Endoscopic surgery is widely accepted in these surgical specialties because the surgery performed through a small incision, allows less invasive surgery and quicker rehabilitation.

Orbital surgery can be performed with the adjunctive use of an endoscope attached to a videomonitor. When combined with transcaruncular and subconjunctival approaches to the medial and inferior orbits, a skin incision can be avoided. Indications for endoscopic-assisted transcaruncular and subconjunctival approaches to the orbit include: 1) the repair of medial and floor fractures; 2) the biopsy and removal of medial and inferior orbital tumors and; 3) two-wall orbital decompression.

The advantages of endoscopic orbital surgery include a smaller incision, decreased need for retraction and disruption of delicate ocular adnexal tissues, better visualization, less bleeding and postoperative pain, and quicker rehabilitation. Teaching new orbital surgical techniques is facilitated with the use of the videoendoscope. Procedures can be videotaped and used subsequently for educational purposes. Shown in Figure 3 and 4 is a patient before and after a three wall orbital decompression.

Other uses of the endoscope in orbital surgery include its potential use in the transnasal endoscopic approach to expose the medial rectus muscle from the annulus of Zinn to the penetration of Tenon's capsule.[7] A combined transconjunctival and intranasal approach for decompression of the optic canal has recently been described.[8] In ophthalmological surgery, other uses of the endoscope include ciliary process photocoagulation for end-stage glaucoma[9], intraocular lens implantation[10], and vitreo-retinal surgery.[11]

Laser Surgery of the Eyelids and Ocular Adnexa

The use of the CO_2 laser in cosmetic and reconstructive eyelid surgery is gaining increasing acceptance in the field of oculoplastic surgery. Since the publication on laser eyelid surgery by Baker,[12] not until the advent of ultrapulsed and continuous wave CO_2 laser and the development of laser-safe surgical instruments has this technique become widely used in the United States.

The superpulsed CO_2 laser (Coherent Medical Group, Palo Alto, California) allows for computer controlled vaporization of the epidermis, papillary, and reticular dermis of the thin eyelid skin for removal of superficial lesions and rhytids.[13] The continuous wave mode of the CO_2 laser allows precise surgical incisions with excellent hemostasis. The advantage of laser eyelid surgery is early rehabilitation due to increased hemostasis and decreased postoperative swelling and bruising.

The continuous wave CO_2 laser in eyelid surgery is used for repair of ptosis, correction of eyelid malpositions such as entropion and ectropion, as well as the removal of benign and malignant eyelid lesions. The pulsed mode of the CO_2 laser is used for the vaporization of seborrheic keratoses, xanthelasmas, and the cosmetic improvement of periocular rhytids.[14]

The increased cost of the use of the laser is offset by the shorter recovery phase. Postoperative pain after laser eyelid surgery is minimal or absent. It is theorized that laser cauterization of sensory nerves may account for this relative lack of discomfort. Proper ocular protection of the patient, as well as the operating room staff is necessary during laser eyelid surgery.

Advances in Enucleation: The Hydroxyapatite Orbital Implant

An enucleated eye is replaced by placement of an orbital implant to prevent orbital atrophy and superior sulcus deformity. In the past, the orbital implants were spheres of glass, polymethlymethcrylate, silicone, or bone harvested from the iliac crest or rib.

Problems associated with these implants include infection, delayed or immediate rejection and extrusion, as well as lack of motility.[15] Furthermore, the weight of the prosthesis supported by the lower eyelid caused laxity and ectropion of the lower eyelid.

Hydroxyapatite is a new orbital implant material which has a unique interconnected porous matrix derived from marine coral with a mineral composition similar to bone. This orbital implant undergoes fibrovascular ingrowth of the patient's own tissue, becoming truly integrated and less likely to reject, migrate or extrude. The hydroxyapatite implant may be used with other surgical techniques, more complex than standard enucleation.[16]

Since the orbital implant integrates with the patient's own tissues the extraocular muscles can be attached directly to the implant, allowing postoperative motility synchronous with the fellow eye.[17]

This property of the integrated hydroxyapatite implant offers several advantages to the patient undergoing enucleation: 1) Motility of the prosthesis; 2) Less weight bearing by the lower eyelid which lessens the chances of lower eyelid ectropion; and 3) Less rejection of the hydroxyapatite implant because of the vascular ingrowth. Once the hydroxyapatite implant has vascularized, the implant is drilled and a motility implant sleeve or a motility peg is attached and coupled to the artificial eye (Fig. 5 and 6).

Vascularization of the implant has to be established before the artificial eye is attached. Technetium-99m-methylene diphosphonate (MDP) scintigraphy is a non-invasive method for determining the

vascularity of the hydroxyapatite ocular implant.18 Another method is the use of a gadolinium DPTA-enhanced MRI with surface coil.[19]

After the implant has successfully integrated into the orbit, a motility implant sleeve is drilled into the hydroxyapatite implant and a peg attached to the prosthesis is connected. This final stage couples the implant to the prosthesis and allows for extraocular motility.

The hydroxyapatite implant is popular with oculoplastic surgeons because of the natural eye movement, resistance to extrusion, rare complications, and flexibility in fitting the socket. Hydroxyapatite spheres are contraindicated in those situations other orbital implants are contraindicated; ie, severe trauma with possible orbital infection and orbits with poor vascularization and healing qualities, such as after irradiation, and orbital infection.

Complications of the procedure include infection, conjunctival dehiscence, and rejection of the implant. Currently, research is being done on other types of synthetic orbital implants such as a porous polyethelyene implant with properties similar to the hydroxyapatite implant.[20]

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Corneal & Refractive Surgery

Gilbert K. Yamamoto MD, FACS

Excimer lasers and high technology instrumentation have ushered in a new era of vision improvement surgery in Hawaii, replacing the more traditional forms of refractive surgery: cataract surgery, corneal transplant surgery, and radial keratotomy. Corneal surgery has been enhanced by new techniques of microsurgery and a more effective tissue procurement system for donor corneal tissue. Several laser centers provide the latest in FDA-approved excimer laser procedures including PRK and PTK. Mild to moderate myopia and astigmatism may now be corrected. Off-label use of LASIK, too, may soon be realized.

Corneal Surgery

As on the mainland, corneal surgery in the Islands has provided excellent visual results for patients with opacification and diseases of the cornea. Among the most common causes of corneal disease in Hawaii are corneal damage from previous eye surgery (cataract operations), misshapen corneas (keratoconus), corneal injury and scarring, and corneal dystrophies (granular corneal dystrophy, and Fuchs' endothelial corneal dystrophy).

The most common of the corneal operations done locally is the corneal transplant — which replaces the opacified cornea with a clear donor cornea. Besides the expertise of an experienced corneal surgeon, successful transplant surgery also requires the assistance of a local organ donor bank in procuring suitable tissue that is properly screened and processed. Patients with corneal disease are carefully evaluated by the cornea specialist, and then are placed on waiting lists maintained by the local eye bank. As soon as the donor tissue becomes available, the surgeon is notified, and the patient is brought to the hospital for outpatient surgery. Most corneal transplants can be done under local anesthesia (few still requiring hospitalization) with operating times just under one hour. Many of the hospital centers are well equipped with the latest operating microscopes, experienced assistants, trephines, viscoelastics, and fine sutures to insure precise removal of the central 7-8 mm of the recipient, replacing it with a donor cornea.

Recovery after the corneal transplant surgery along with the ensuing visual rehabilitation process requires a long time. Often a "triple procedure" can be done in which the transplant surgery is coupled with removal of a cataract, and implantation of an intraocular lens implant. Intraocular lens implant exchanges can also be performed with techniques of suturing lens implants into the sclera when there is no support in the posterior chamber. These combined procedures require skillful management to determine the proper power of the lens implant to closely match the resultant eye power after the cornea operation.

Adjustment of corneal sutures and wounds postoperatively has become one of the greatest challenges for corneal surgeons. Another advanced technology in Hawaii is videokeratography and corneal topographic analysis which have helped the surgeon with this problem of corneal shape management postoperatively.

The success in restoring good vision after corneal surgery depends on many factors. The surgical manipulation is critical, but so is the effective management of potential complications such as graft failures, secondary glaucoma, and corneal rejection reactions. Although most corneal surgeons have successful results in over 80% of their grafts, adverse outcomes may warrant repeat transplants in 10-15% of cases despite the precautions of using topical antibiotics, steroid eye drops, and immunosuppressive agents.

Eye Banking in Hawaii - Hawaii Lions Eyebank and Makana Foundation

The Hawaii Lions Eyebank & Makana Foundation has been in operation since 1980, when the late Dr Kent Bennett of Straub Hospital & Clinic, and I obtained the support and commitment from the Hawaii Lions of District 50 to adopt the Makana Foundation as one of its major projects. The Eyebank and its major supporters have served our community well by procuring, processing, and distributing donor eye tissue, and promoting organ and tissue donations. It has provided our patients with eye tissue for nearly 1,700 surgical procedures, a majority of which were used for corneal transplantation. The HLEB & NIF has a full-time executive director, a medical director, and a full-time technical director. It is accredited by the national eye bank organization, Eye Bank Association of America, and is part of a network of cornea banks working together to facilitate tissue procurement and distribution nationwide. There is a close working relationship between the Hawaii Lions Eyebank & Makana Foundation and the Organ Donor Center of Hawaii, which handles recovery and processing of the other transplantable organs. The Eyebank processes donor corneas and stores them in special tissue culture media prolonging their viability, and also examines and tests the tissue for transmittable diseases such as hepatitis and AIDS.

It has been estimated that our needs in Hawaii range from 120 to 140 corneas annually, of which three-quarters are obtained here. There are 16 ophthalmologists here and on neighboring Guam and the Philippines, who use the HLEB & NIF for cornea and scleral tissue. Patients are placed on the transplant list in the order in which they are registered by their eye surgeons. The wait for donor tissue averages three to six weeks. Through the dedicated effort of the Lions of District 50 and the Eyebank directors, local donations have tripled during the past 3 years despite the diversity of ethnic and religious preferences here in the Islands. There are approximately 38,000 organ and tissue donors registered here in Hawaii.

Refractive Surgery in Hawaii

Cataract and corneal surgery are the traditional forms of refractive surgery that are performed on eyes with sight-threatening disorders. Hundreds of these procedures are done in Hawaii each month and many Island ophthalmologists are well versed in the indications, techniques, and complications (see cataract surgery segment of this monograph). However, radial keratotomy and the newer forms of excimer laser refractive surgery that are currently available are significantly different in that they are:

a) considered elective procedures,
b) surgeries done on structurally normal eyes - increasing risk/benefit ratio,
c) not reimbursed by health insurance, encouraging a "consumer" attitude,
d) technically more challenging, require expensive accessories, computerized lasers, and
e) associated with advertising, media coverage, co-management with para-ophthalmic practitioners.

Radial keratotomy (RK) has been performed on hundreds of island residents since the late 1980s, with excellent results for those who had low to moderate nearsightedness and astigmatism. Although few are performed today, the procedure was relatively simple, requiring diamond-blade knives, steady hands, a microscope, and pachymeter. Four, eight, and sixteen-cut incisions of varying lengths were capable of flattening the corneal shape to provide 20/40 or better vision to 90% of patients. Despite comfort during the procedure with topical anesthesia there were several days of pain and discomfort after the surgery. Fortunately, there were few complications, but the worst were overcorrections, induced astigmatism, and persistent glare in highly myopic patients. RK may still have some usefulness in patients who require visual enhancement surgery for low corrective and mild astigmatic refractive errors after cataract surgery. For many refractive corneal surgeons, the RK diamond blades can now be **useful** for making sharp, clean incisions for no-stitch cataract surgery.

Photorefractive keratectomy (PRK) has now replaced radial keratotomy as the treatment of choice for patients with mild to moderate nearsightedness and astigmatism. It is an outpatient excimer laser procedure that can reshape the cornea by (ablating) removing small amounts of tissue in the central visual axis, instead of making radial incisions into the peripheral cornea as in radial keratotomy surgery. PRK has resulted in patients not requiring glasses or contacts, with as many as 95% having been made to see 20/40 or better — well enough to pass their driver's licensing eye exam. There are three laser centers in Hawaii — one using the Summit Apex laser and two using the VISX Star laser to perform refractive keratectomies, requiring only topical anesthesia and a few minutes under the laser beam. The physician
and skilled technicians operate the excimer lasers using integrated computers and pre-programmed laser cards designed to deliver precise cuts according to the patient's refractive errors.

Phototherapeutic keratotomy (PTK) uses the excimer laser to ablate superficial scars from the corneal surface. Successful removal of granular corneal dystrophy scars has been performed locally. Other applications may prove useful in patients with recurrent corneal erosion syndrome. Although not intended to be a refractive procedure, PTK, effecting the removal of tissue from the cornea, may cause eccentric corneal thinning and induce refractive changes. Moreover, corneal opacities from dystrophic conditions could return after several years.

Automated Lamellar Keratoplasty (ALK)

ALK is used to reduce high levels of nearsightedness, and can also be used for farsightedness. The procedure requires a microkeratome which slices across the superficial cornea creating a thin flap. The second part requires another slice across the corneal stroma, removing a thin disk of tissue. The flap is replaced without sutures. For farsighted eyes, only the thin flap is made, and no stromal disk is removed. Over- and undercorrections are significant with ALK results, with irregular astigmatism also causing decrease in best-correctable vision. ALK had a place in refractive surgery during pre-excimer days, but it is all but being replaced by a more precise and predictable LASIK procedure.

Laser-assisted In-Situ Keratomilcusis (LASIK)

LASIK is a procedure which also corrects the moderate to high degrees of nearsightedness. LASIK is the combination of ALK and PRK, in which the surgeon uses a keratome to shave a thin layer of tissue off the center of the cornea as a flap, and completes the process with excimer laser to remove a thin layer of tissue from the corneal stroma. The flap is replaced without sutures. LASIK is now being done regularly at many laser refractive centers in Canada, Europe, and South America, however, in the United States, it is still considered an "off-label" procedure, similar to use of certain approved medications for non-approved circumstances. Many Hawaii residents have already had this procedure in Colombia or Canada with good results. More investigational studies are required by the FDA before LASIK can gain approval for general use in the U.S. Reports so far have been very encouraging in determining its safety and long-term predictability. Many who have had the procedure claim that there is very little discomfort after the procedure. Since LASIK relies on precise shaving of the corneal cap, surgeons performing this operation must be adept with both highly technical tools — the microkeratome and the excimer laser.

Current Status of PRK, PTK, RK, AILK, and LASIK

Radial keratotomy is a relatively simple procedure. It has the longest record of scrutiny by researchers and the FDA, and can claim results of 90% of patients seeing 20/40 or better in those lower degrees of myopia. There has also been a large accumulation of literature worldwide, covering every facet of RK complications and what to do about them. Radial keratotomy surgery does require touch-up surgery in 30-50% of cases, but everything is done using inexpensive equipment in an outpatient office setting.

On the other hand, laser refractive surgery is still in its infancy. Fewer than 500 patients have had PRK in Hawaii since laser centers opened 1-2 years ago. Setup expenses are high for refractive laser surgeons who must increase their malpractice liability, invest in specialized equipment (laser center access fees, videokeratometers, and microkeratomes), and gain certification for PRK by taking

mainland workshops and performing one procedure under supervision at a laser center. The length of the learning curve varies for each surgeon especially for the more technically-challenging microkeratome/excimer laser combination procedures of ALK and LASIK. Lasers need constant maintenance for precise energy output and beam quality, and can be fallible during power failures, and computer glitches. In all procedures patients must be carefully screened by an ophthalmologist since there is a growing list of eye problems that are contraindications to laser refractive surgery. Refractive surgery is not a casual procedure that anyone can do and do well. An experienced LASIK surgeon advised that in order to keep up with the procedure, that at least one procedure per week be done. There are risks (2-3%) which may leave a patient losing 2-3 lines of best-corrected vision after refractive surgery! And, just as I would have strong reservations about allowing optometrists to perform laser surgery, I personally would also have a problem sharing a patient with a nonmedical eye care practitioner in a co-management arrangement.

Interest for the surgery has increased rather slowly in our community perhaps due to high out-of-pocket costs for the procedure and the unstable economy. But more so, I believe this may be due to the cautious attitude of conservative island residents who demonstrate aversion to risk. For most patients the mild-moderate discomfort for a few days are tolerable in return for good vision without need for glasses. However, in a small number of cases there may be annoying fluctuating vision, and a hazy quality of vision that may persist for weeks after surgery. In cases where undercorrections or induced astigmatism are obtained, additional enhancements can be done but are sometimes more difficult with PRK. Overcorrections must be corrected with either glasses or contact lenses, too often with some difficulty. Central corneal haze can be treated with manual debridement or topical steroid drops and should disappear. Other problems such as secondary glaucoma from use of steroid drops, corneal infections and scarring occur rarely.

Wound healing in refractive surgery plays an important role in determining results. Age and sex are significant factors with young females more apt to have varying visual results from hormonal influences. It is important to stress to patients preoperatively that refractive surgery has risks as well as promise of vision improvement without contact lenses and glasses. Remember that PRK patients in the U.S. have only had a 3 year follow-up period. There still may be those unexpected problems associated with a thinner cornea that could affect such things as inaccuracy measuring intraocular pressures in unexpected glaucoma patients, and vision loss affecting high altitude mountain climbers.

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YOU ARE WELCOME TO CALL ANY OF THE FOLLOWING:

Contact	Island	Phone #
Gabrielle Bemis Batzer, M.D.	Oahu	(808) 566-1403
Ed Gramlich, M.D.	Oahu	(808) 956-7457
William Haning, M.D.	Oahu	(808) 236-8497
Leonard S. Jacobs, M.D.	Oahu	(808) 254-5385
Virgil Jobe, M.D.	Oahu	(808) 522-3220
Roger Kimura, M.D.	Oahu	(808) 523-6966
Gerald McKenna, M.D.	Kauai	(808) 246-0663
Ronald Peroff, M.D.	Oahu	(808) 231-1333
S. Larry Schlesinger, M.D.	Maui	(808) 871-7502
Stephen Wallach, M.D.	Oahu	(808) 521-3851

or call or write to:
Hawaii Medical Association
1360 South Beretania Street, Second Floor
Honolulu, HI 96814
(808) 536-7702, ext 2234 or ext 2230
fax (808) 528-2376

Ophthalmology in Hawaii 1997 and Beyond

Russell T. Stodd MD

While we have served, performed, studied and prepared, almost before any of us have realized it, the 21st century is at our door. The date represents a junction, or perhaps a new beginning in our minds, for the future of ophthalmology and eye care in Hawaii, but it is merely a continuum.

The dynamics of the evolution in the preservation of sight for Hawaii's people border on fantasy. As the various articles in this Journal testify, the level of care in Hawaii today rivals any metropolitan community in the western world.

The tools available for eye surgeons of 1960, were not significantly better than the tools of one hundred years previous to that time. One wonders, did we actually perform eye surgery without microscopes? Was it possible to care for patients without lasers? Did we not always have viscoelastics, exotic gases, steroids, multiple antibiotics, glaucoma valves, intraocular lenses, ganglionic blockers, enzymes and enzyme inhibitors?

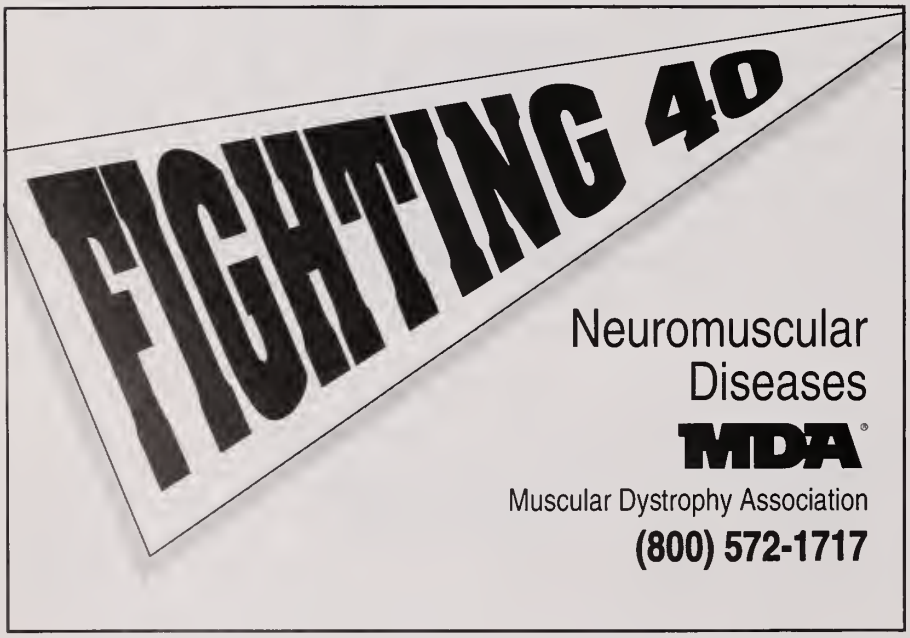
What has evolved in America and the world of scientific medicine is a system of communication and cooperation which permits ideas, devices, medications and procedures to be shared electronically in the blink of an eye. Here in the islands, the most remote from any continent, we enjoy ophthalmic medical facilities of the finest quality, and the most modern in development, with matchless technical equipment. Moreover, there prevails an abiding desire in the medical community to maintain a level of unexcelled skill and knowledge.

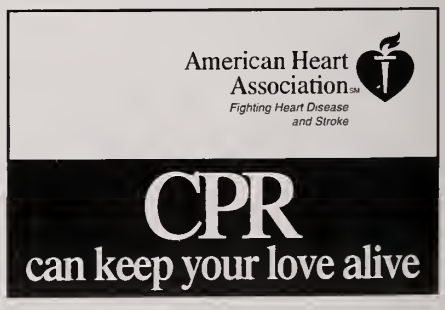
Conferences, seminars, courses, forums, and open meetings abound in various locations all around this state. Scholars, professors, and research scientists from around the world are constant visitors to our islands. In addition, Hawaii has a broad collection of skilled and knowledgeable opthalmic physicians who have been educated and trained in the most prestigious eye centers in the world. Contributions in research by Hawaii's ophthalmologists are ongoing and are frequently published in current opthalmic literature.

Twenty-two years ago, eye surgeons of Hawaii joined together to establish the Hawaii Ophthalmological Society. This organization has enlarged and prospered, welcoming all qualified eye physicians. It has grown to become the voice of medical eye care in Hawaii, offering regular scientific meetings, participating in educational fairs, and offering testimony before the state legislature on medical issues.

Along with this unparalleled development of physicians and equipment, the desire to provide access for all is unquestioned. Sponsored by the American Academy of Ophthalmology, many of Hawaii's ophthalmologists participate in the National Eye Care Project. The NECP maintains a comprehensive listing of physicians who agree to provide services for the medically indigent. This system records each patient request for free eye care and assigns a Hawaii ophthalmologist in rotation. No one is denied access for lack of ability to pay.

As the year 2001 approaches, the citizens of Hawaii as well as organized medicine can take pride and satisfaction in what has been built for comprehensive eye care. Moreover, the future for the perfection and preservation of eyesight is bright and the vistas limitless. The goal of eliminating the fear of blindness from vascular disease, glaucoma, diabetes, macular degeneration, and other conditions, is a reasonable one and is within our grasp.





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Council Highlights

Friday, August 1, 1997
Roger Kimura MD, Secretary

The meeting was called to order by Dr Spangler, President at 5:38 p.m.

Those present were Drs L. Howard, President-elect; C. Lehman, Immediate Past President; C. Kelley, Treasurer: R. Kimura, Secretary; AMA Delegates: C. Kam, A. Kunimoto; Alternate AMA Delegate: F. Holschuh, Vice-Speaker: P. Blanchette; County Presidents: W. Dang Jr. - Honolulu, G. McKenna - Kauai, A. Bairos - W. Hawaii; Councilors: P. Chinn, C. Goto, M. Shirasu, R. Stevens, W. Young, M. Yolles, P. Kim, C. Kadooka, B. LeeLoy; Past Presidents: W. Dang

HMA Staff: J. Won, B. Kendro, N. Jones, P. Kawamoto, J. Asato, A. Rogness-recording secretary.

Minutes: The minutes of the July 11/97 Council meeting were approved as circulated.

• Dr Spangler reported: 1) that the President of the American Society of Reproductive Members wrote an article urging physicians to join the AMA. 2) he received a letter from the HMA Alliance stating that they will not be holding their annual meeting in conjunction with HMA's Annual Meeting; 3) he called for volunteers to be on the adhoc committee to meet with pharmacists regarding concerns. Drs L. Howard, S. Wallach, J. McDonnell and Dr Spangler will be members of the adhoc committee.

For Action

• A motion was passed by Council to co-sponsor a Patient Advocacy Forum with the purpose of helping to bring groups together for discussion. Mr Won will keep an accounting of HMA staff time. (The focus is on patient advocacy groups that represent their particular constituency on how to understand the political processes and to work with their physicians.)

• A motion was passed by Council to support the Advocacy Resource Center Participation. This Center has been developed as a way for the AMA to support and provide a number of services to state and county medical societies.

• A motion was passed by Council to allow Drs Kam and Kienitz to send their Workers' Compensation Survey to Specialty Societies.

Component Society Reports

Honolulu.—Dr W. Dang Jr., reported that Tuesday, August 12, Dr B. Fong will be giving a presentation on the new changes from the switching of Medicare from Aetna to the North Dakota group.

Maui and Hawaii.—No report.

West Hawaii.—Dr Bairos reported that he and Dr LeeLoy are having a meeting to discuss how to get physicians interested to attend meetings from their County.

Kauai.—Dr McKenna reported that Kauai County recently had a general membership meeting and 38 members attended. Eight (8) were new members. Members were brought up-to-date on what the HMA Council is doing. The Kauai Alliance also gave an update on its activities. Dr Bill Shankel gave a talk about his experiences as a POW in Vietnam which was very interesting and well received by all who attended.

For Information

Bylaws Committee.—The committee presented its draft of the bylaws to Council for consideration. A few changes were made and the bylaws will be mailed out to membership via the newsletter at least 30 days before the annual meeting.

Recognition of Dr Calvin Sia.—Nine outstanding individuals were honored by the National Governor's Association. Dr Sia was honored in the private citizen category for championing the creation of responsive and effective services for young children and their parents.

PGMA.—Drs L. Howard, J. Spangler, Mr J. Won and HMA's attorneys met with Mr Rey Graulty, the insurance commissioner, his assistant and their attorney. Par or Nonpar physicians cannot seek reimbursement for PGMA's share of outstanding claims, however the portion paid by the patient can be billed. All claims after March 7, 1997 are to be paid in full. It was noted that payment of the claims would probably not occur in the near future. HMA will receive a letter from the insurance commissioner stating that the hospitals and physicians will be treated equally. Mr Graulty plans to propose a bill this legislative session to increase the financial reservea that mutual benefit societies must carry. The HMA Officers will keep Council informed of developments.

Physician Contract Review.—HMA was asked by a number of physicians to comment on the University Health Alliance Contract. HMA's attorney reviewed the contract and submitted comments.

Program on Pain Management.—It was announced that the program sponsored by Knoll Pharmaceutical will be held on Sept. 18 on the Big Island, Hilton Waikaloa and on Sept. 19 on Oahu at the Hilton Hawaiian Village. The program for Kauai and Maui will be scheduled in mid November. Flyers for the program will be sent out shortly and the cost is $10 per person which includes dinner and all registration materials. It will start at 5:00 p.m. and will be about a three hour program.

Annual Meeting.—Dr Shirasu reported that the annual meeting brochure/registration was sent out and encouraged the Presidents of the Component Societies to remind their members to attend and to register early.

Meeting was adjourned at 7:40 p.m.

News and Notes Henry N. Yokoyama MD

Life in These Parts

Appointed, Elected & Honored

Straub oncologist ***Reginald C.S. Ho MD*** was awarded the prestigious La Salle D. Leffal Jr. Award for his outstanding and continued work with cancer patients. Reggie received the award on April 26 during the 6th Biennial Symposium on Minorities, "The Medically Under Served & Cancer."

While ACS National President, Reggie was concerned about the national surveys which showed that pain in cancer patients was inadequately treated and that most cancer patients died in pain. He organized a task force of cancer pain experts which helped ACS develop a program to correct the issue. Reggie states, "No cancer pain should be endured. Cancer pain can be relieved 90% of the time with relatively simple treatments and with more effort, the rest of the time. Patients should not be afraid to take pain medication at the dosages prescribed by their doctors; patients rarely become addicted. It's also very helpful for the cancer patient to develop a positive attitude with meditation and prayer. And I recommend that cancer patients understand their right to expect pain relief."

Ruth Matsuura, Hilo pediatrician and wife of the late Senator Richard Matsuura was honored in June with Hilo's Distinguished Humanitarian award.

EMS physician ***Samuel Gingrich*** was awarded the prestigious "Livingston M.F. Wong Lifetime Achievement Award" in an awards ceremony at the 12th Annual Pre-Hospital Emergency Care Symposium on May 17 at Kuakini Medical Center.

National News

Hi Lites of Tobacco Deal:

Penalty—Tobacco companies pay $360 billion in the first 25 years and then 15 billion a year.

Nicotine—The FDA could regulate nicotine as a drug, but could not ban it until 2009.

Cigarette Corporations' Liability—Sick smokers could still sue the industry.

Marketing—

- No bill boards or other outdoor ads.
- No humans or cartoons in ads or on cigarette packs.
- No brand name sponsorship of sporting events.
- No cigarette vending machines.

****Settlement ends 40 state lawsuits seeking to recover Medicaid money spent treating sick smokers and end 17 class action suits against the industry.*

Losers—

- Smokers could pay 75 cents to a dollar per pack.
- Farmers, mostly in south, might suffer from dropping tobacco sales.
- Convenience stores, which sell half the cigarettes in the U.S. lose business.
- Lawyers lose out - people suing cigarette companies can only recover actual damages eg. medical costs.

Medical Tid Bits *(Gleaned from PlayBoy June 97)*

Oil of Oleo—

Joaquine Brear, clinical dermatologist, U. of Illinois says, "The best over the counter treatment for dry skin is CRISCO."

Name that Symptom *(From Stitches June 1997)*

Name that Symptom—

The other day a 25-year-old Chinese patient came into the clinic complaining of neck pain.

After examining him, I concluded that he had a neck strain. I wanted to prescribe Naprosyn, and asked if he had asthma (for which the drug is contraindicated). He didn't understand me, so I made a gesture towards his chest and asked him if he'd experienced wheezing.

With great excitement, he pounded his chest and repeated, "Yes! Me wheezing! Me wheezing!"

I looked at him with great confusion, he knew I didn't understand his excitement, so he pointed to his chart, where it revealed his name: Wei Zeng. *(Sheila Rothstein, Ottawa)*

New Appreciation for "Dr Dara's Diary" in Stitches June '97

(Excerpts therefrom which we find true in our own practice)

Monday—

"But the day was very busy and trying. In between the sick and dying were many who in politically correct days were called 'inadequate' and, prior to that, just plain 'whiners'."

Wednesday—

"I do hate it when spouses say to me, 'Tell him/her not to... but don't say I told you.' The problem is I'm such a bad liar."

Friday—

"I unfortunately had to inform an old lady, the last patient of the day, that her dementia had now made her a liability, on the road, and that she would have to give up her driver's license. 'I guess you're right,' she said. 'I often forget where I wanted to go and after a fruitless drive around town, I give up and go home, though sometimes I have difficulty finding that'."

Conference Notes

"Nihonsan Study", *Katsuhiko Yano, MD, PhD*

(Ni=Japan Hon=Honolulu San=San Francisco)

Ala Moana Hotel Plumeria Room on May 29.

History

Organized in 1965 and included: 2,000 men (ages 45 - 69) in Hiroshima, 8,000 men in Honolulu and 1,800 men in San Francisco

Purpose

Comparative study of cancer, cardiovascular disease and osteoporosis.

Results

CAD Incidence:
Hawaii men have 2 times more than Hiroshima men; S.F. men have 50% more than Hawaii men.

CVA Incidence:
Hiroshima men have 3 times more than Hawaii and S.F. men.

Obesity:
Hawaii and S.F. have more obese men than Hiroshima.

Hawaii men have higher levels of:
Total cholesterol, uric acid, and hyperglycemia

* Conclusions: (after 200 autopsies in Hiroshima and 300 in Honolulu)

re Cerebrovascular Disease

The incidence of hemorrhagic strokes is the same for Hiroshima and Honolulu men.

Incidence of cerebral infarctions is greater in Japan (esp in small intraparenchymal cerebral arteries which is associated with hypertension rather than atherosclerosis) The incidence of major cerebral artery atherosclerosis is higher in Hawaii men.

Projection: *Recent changes in environment and life-styles in Japan may lead to more CAD in Japan a/c with higher cholesterol levels, and more obesity and less strokes with better control of hypertension.

re Mean BP levels

Same for Hawaii and Japan, but higher in California. BP 160/95: Japan 25%; Hawaii 15%

re Diet

Lower animal fats and protein in Japan

re Smoking

75% men in Japan; 45% men in Hawaii; and 35% men in S.F. Heavier smokers (0ver 20 cig/d) in Hawaii men.

re Alcohol Consumption

Japanese men drinkers number 2 times more than Hawaii men and 3 times more than S.F. men.

re Longevity

Japanese men in Japan are the longest lived in the world, but Japanese men in Hawaii are even longer lived by 4 years.

Conference Notes

Health Insurance in Hiroshima (100% coverage)

Dr Hiroki Nakatani, Director-General, Dept. of Health & Welfare Services, Hiroshima Prefecture

At present, private insurance 47%; prefectural 53%; 40 years ago, 60 to 70% of health insurance was private. Separate health insurance programs

for employees, farmers, and the elderly.

re Malpractice cases

There are 300 court cases in all of Japan; while 10 times or 3,000 cases are settled out of court.

re Japanese Health Insurance

- Self employed: covered by city or prefecture
- Large companies eg. Sony and Toyota have their own health insurance programs
- Farmers and the elderly have separate programs (nursing home insurance for the elderly)

re Fee Scale

Fees for service (universal) reviewed twice a year. Problem with the increasing elderly population. There are 1.8 workers to each retiree; the ratio may be 1 to 1 in the future.

Conference Notes

"Treatment of Alzheimer's—New Developments and Implications for the Future"
QMC April 4, ***V.P. Robert Bradshear III***, Assistant Professor of Neurology and Psychiatry, University of Virginia.

Dementia

- Alzheimer's D
- Vascular Dementia
- Mixed Dementia

Impact

- Alzheimer's is an age related disorder. 4.5 million cases in the U.S. Any treatment will help health care survival. Definitive therapy needed.

Diagnosis of Dementia Syndrome

- Loss of intelligence sufficient to impair social or occupational functions.
- Memory impairment
- Defect in judgement, abstraction, language, custodial abilities
- Diminished alert state of consciousness

Causes of Dementia

(70 to 80 diseases involved)

Ddx: Vascular, Infectious, Metabolic etc

- Vascular causes
 - Hypertension affects white matter
 - Lacuna strokes
 - Multiple infarcts (Most common cause of dementia)
- Infectious causes
 - Neurosyphilis
 - Bacterial, viral, protozoan etc.
- Traumatic causes
 - eg subdural
- Toxic causes
 - Medications: eg benzodiazepines, barbiturates, sleeping pills etc.
- Metabolic causes
 - eg B_{12} deficiency
- Inflammatory causes
 - Multiple sclerosis
 - Inflammatory arthritis
 - Limbic encephalitis
 - Malignancy
- Systemic diseases:
- Hydrocephalus
- Neurodegenerative diseases
 - Pick's disease a/c Cr 17
 - Huntington's disease
 - Parkinson's disease: 1/3 dementia
 - LewyBody Variant of Parkinson's

Pathogenesis of Alzheimer's D

- Neuro-imaging to exclude other diseases
- Dx is histological
- NSAID's may have protective value
- Vascular amyloid
- Neurochemical changes in A.D. and P.D. (Alzheimer's and Parkinson's diseases)

	A.D.	P.D.
Acetylcholine	↓↓↓	↓–
Somatostatin	↓↓↓	↓–
CRF	↓↓	–
Substance P	↓–	↓
Serotonin	↓–	↓

Clinical Aspects of Dementia

- Reversible Dementia <5%
- Treatable Dementia 10%
 Total 15%
- A.D. (Alzheimer's)
- P.D. (Parkinson's) = Vascular Dementia 2/3

Criteria for the Clinical Dx of Probable A.D.

- Clinical exam and neuro-psychologic test
- Deficits in at least 2 cognitive areas
- Progressive worsening of memory and cognition
- No disturbance of consciousness
- Onset ages 40 to 90
- Absence of other causes of Dementia

Routine Testing for Dementia Workup

• CBC	$15
• Chem 17	$31
• Thyroid scan	$71 (TSH & T4)
• B_{12} (folate)	$45
• Serology	RPR $12 MHA TP $10
• ESR	$17
• Neuroimaging	Unenhanced CT $318 + $234 (professional fee)

Diagnostic Algorithm

Cognitive Impairment
↓ (Exclude delirium, depression, malingering, etc)
- Meet criteria for dementia

Dementia
↓ (Exclude treatable dementia, static encephalopathy)
- Lab testing, neuroimaging

Primary Degenerative Dementia
↓ (Exclude other disorders)
- Meet NINCDS/ADRDA criteria

Probable Alzheimer's Dis.
↓ (Exclude other pathology)
- Pathological exam

Definite Alzheimer's Dis.

Alzheimer's Disease: Good genes/Bad genes?

- Familial A.D.
- B-Amyloid & Amyloid precursor disorder
- Cr 21
- Cr 14
- Dr 19
- APOE

Treatment A.D. & Other Dementia

- Specific treatment for reversible dementia
- Symptomatic treatment—Identity specific behavior
 - Tacrine & other Rx
- Definitive treatment for A.D.—New trials
- Support treatment: Accurate diagnosis & genetic counseling

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There's No Excuse for Domestic Violence

Medical School Hotline
Continued from Page 224

University of California at Berkeley, Irvine, UCLA, and Santa Barbara, Universities of Washington, Michigan, Pennsylvania, Vermont and West Florida, Columbia University, Loyola Marymount University, Stanford University, Wellesley College, Brown University, Bryn Mawr College, Creighton University, Linfield College, Marquette University, Northwestern University, New York University, Occidental College, Pacific Lutheran University, Pomona College, Seattle Pacific University, Tufts University, Williams College, and Yale University.

All of the students have Baccalaureate degrees; eight have Masters degrees and one holds a Doctorate. Twenty are Biology Majors and there are two each in the following majors—Psychology, Civil Engineering, English, History, and Human Biology. Other undergraduate majors are—Zoology, Art, Biochemistry, Japanese Language and Literature, Biomedical Engineering, Business Administration, Chemical Engineering, Chemistry, Biological Science, Early Childhood Education, English, Public Health, Genetics, Marine Biology, Mathematics, Microbiology, Nutrition, Pre-Medicine, Psychobiology, Religion, Visual Arts, and Zoology.

The Admissions Committee is composed of ten volunteer members. Equal numbers of male and female members represent the clinical and basic sciences. One member is from the community-at-large. The major ethnic groups in Hawaii are represent, so too are a variety of age levels. The Committee meets from September through the middle of May.

The ranking of the 232 interviewed candidates was determined by the Admissions Committee through secret ballots. Considered in the rating by each committee member were the following: Hawaii residency status, academic scores (Grade Point Average and scores from the Medical College Admissions Test-MCAT), interviews, essays that answer the questions, "Why medicine?" and "Why the John A. Burns School of Medicine?", letters of recommendation, and a biographical sketch and transcripts from the American College of Admission Service (AMCAS). In addition, credits are provided for clinical/health-related experiences (i.e. employment, community services, volunteerism and related research/graduate studies). Finally, the applicant is interviewed by the Chair of the Admissions Committee who is also the School's Associate Dean.

A comparison with the nationwide April, 1996 MCAT scores illustrates that JABSOM's first year students' scores are competitive with the national norms. The averages of all those who took the MCAT in 1996 were: Verbal Reasoning 8.0, Physical Sciences 8.3, and Biological Sciences 8.5. The incoming JABSOM students averaged 8.87 in Verbal Reasoning, 9.12 in Physical Science, and 9.88 in Biological Sciences. (note: the scores cited for JABSOM students are from the 1994, '95, and '96 test results since MCAT Scores are valid for a period of three years for admission purposes to JABSOM. However, the average scores each year do not vary significantly.)

Each student has been assigned a faculty advisor who is in close contact with him/her throughout the four years. Students are encouraged strongly to seek the assistance of their advisors.

The members of the class of 1997 are on their way to an exciting and humanitarian journey which will lead them to a lifetime of fulfillment. They have been selected in the best way we know to ensure that the community will be served by competent, well-trained physicians who are not only scientists but also masters in the art of comforting their fellow human beings.

Classified Notices

To place a classified notice:

HMA members.—Please send a signed and typewritten ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in HMJ as space is available.

Nonmembers.—Please call 536-7702 for a nonmember form. Rates are $1.50 a word with a minimum of 20 words or $30. Not commissionable. Payment must accompany written order.

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Experienced Family Practice.—Office coverage including office surgical procedures (Board Certified), and available on regular basis or short notice. Maui only (808) 878-6119.

Take an Afternoon Off.—While your office stays open. Part-time primary care office coverage on a regular or occasional basis by longtime Honolulu physician. Contact John Wichmann-Walczak MD at 739-9483 or 524-2575.

For Sale

Equipment for sale.—Used Bone Densitometry Equipment. DXA - Hologic QDR 1000 (new x-ray tube) $15,000, SXA - Osteoanalyzer 2000. $9,000. Will assist with training and interpretation. Hawaii Osteoporosis Center 592-2626.

Practice for Sale

Cardiology Practice for Sale.—Fully equipped office including stress testing, echo and holter monitoring. c/o Century 59 Hoku St., Hilo, HI 96720.

Announcement

General Practice Opened.—In Kapahulu area by 20-year veteran of St. Francis ER. New patients welcomed; free pkg; convenient hrs; house calls (downtown Honolulu-Aina Haina). John Wichmann-Walczak MD at 750 Palani Ave., Honolulu 96816. 739-9483

Business Opportunity

Veteran Certified Petroleum Geologist.—Wishes to team up with oil and gas investment capital finder. Excellent remuneration. (614) 453-9231 or fax (614) 450-7507.

Misc.

Cars for Catholic Charities.—Give hope to a needy child or family by donating your car to Catholic Charities. Your donation is tax deductible at the fair market value. Call (808) 537-6321, Ext. 303 for more information.

The Weathervane

Russell T. Stodd MD

Bureaucracy defends the status quo long past the time when the quo has lost its status.

In the discussion surrounding the cost of doing business in Hawaii, often overlooked is the added premium to your malpractice insurance provided by the state legislature. Not only is your carrier required to pay 4.165% gross excise tax, but in addition 3.75% for the Hawaii Hurricane Relief Fund. This state surcharge on your malpractice premium amounts to 7.915% compared with an average of 2.89% in other western states. Malpractice premium for hurricane coverage! Lucky (?) you live Hawaii.

Nothing that well meaning people might do should surprise us.

Not only is latanoprost good for glaucoma, and not only will it sometimes darken pale irides, but now it has been claimed to stimulate eyelash growth. So far, it is an observation, and not a controlled study, but Seattle eye surgeon Murray Johnstone claims that 30 of his glaucoma patients are developing longer, thicker eyelashes. Supposedly, the new look is "quite striking" and the doctor has alertly applied for a patent to use the drug to stimulate hair growth. The pharmaceutical company has made no comment on the report.

Confusion not only reigns, it pours.

A study published in the *New England Journal of Medicine*, suggested that Medicare patients use health maintenance organization (HMOs) as a revolving door. When they are healthy, they sign with an HMO. Then they leave the managed care plan when a medical problem is pending. Those who leave the HMO have about 50% more admissions to the hospital within 90 days, compared with patients who have remained in a conventional Medicare program. The results suggest that HMOs are being overpaid by the Medicare program, and of course, the study has been challenged by the managed care industry.

We are with the government and we are here to help.

Attention Hilo docs: a medical education center will be built in Hilo using $10.75 million in federal loans and loan guarantees. Senator Daniel Inouye made the announcement, that plans are for a two-story, 18,000 square foot building to be located across from Hilo Hospital. The building will house a Family Practice Clinic, which will provide training for doctors and nursing students, a cancer treatment and research center, and fiber optic links to Tripler Army Medical Center's telemedicine facilities. The loans and loan guarantees will be through the Rural Development Agency of the U.S. Department of Agriculture.

Whatever the conversation, they are talking about money.

Premarin is the number one prescription drug in America today. Wyeth-Ayerst Laboratories, a division of American Home Products, generates almost $1 billion annually from this pharmaceutical alone. Several plant-based alternatives to Premarin were in production or on the market in Canada and the U.S. until 1991. Then Wyeth-Ayerst alleged that the generics did not mimic Premarin identically, and the Food and Drug Administration pulled the generics off the market. Two companies, Duramed Pharmaceuticals and Barr Laboratories, stuck out the process and finally met all the FDA criteria. Clearing the last hurdle, the companies naively anticipated FDA approval, and that science would prevail. But now, enter the politicians. Wyeth-Ayerst and parent company American Home Products, launched a pressure attack urging Senators Boxer, Bradley, Snowe, Mikulski and Murray to write letters to the FDA to halt the generic drug's progress. American Home CEO John Stafford attended a White House coffee, and shortly thereafter dropped $50,000 on the Democratic National Committee. The FDA decided that it must re-examine new evidence, which had actually been examined and dismissed twice in the past. The generics were hung out to dry. But an internal FDA memo laid waste to Wyeth-Ayerst claims, and observed that the agency's decision on these matters could have the effect not only of impeding generic substitution, but also of reducing the incentive to develop necessary public health information. Moreover, the inspector-general of the Dept. of HHS, chimed in with a report that provides even more questions about the FDA's laggard management of the petition and lack of documentation to support Wyeth-Ayerst. For purchasers of the drug, such as Medicare, it could mean savings of $300 million per year.

Careful men. They charge when threatened.

Dr J. Trevor Woodhams' reported that the Food and Drug Administration enforcement officers entered his office, and "arrested" a black-box laser. The FDA sources confirmed the doctor's report and claimed the action was taken against the device. This is the first action directed against an unapproved excimer laser owned by an individual ophthalmologist. It was stated that Dr. Woodhams was performing laser in situ keratomileusis (LASIK) at the rate of about 10 cases per week. Of note is that Dr Woodhams practice serves the same area as the Emory Vision Correction Center where LASIK is performed under an FDA investigational exemption. An FDA officer said it was just a "coincidence" that this first blackbox arrest was made in Atlanta.

It is becoming hard to die, because the details of living get in the way.

"The asserted 'right' to assistance in committing suicide is not a fundamental liberty interest protected by the Due Process Clause." So wrote Chief Justice of the United States, William Rehnquist, in the unanimous decision of the Supreme Court. Most major medical groups, including the American Medical Association, generally applauded. However, Justice Rehnquist, whose wife died of ovarian cancer after a protracted battle, conceded that the ruling doesn't foreclose the possibility that dying patients will be granted additional rights in the future. Additionally, several justices in concurring opinions, added that physicians can take aggressive steps—such as providing more and more potent drugs to relieve terminal patient's pain, even if that treatment accelerates death.

Any frontal attack on ignorance is bound to fail.

The U.S. Air Force held a press conference to announce the "final word" about the space alien episode allegedly seen in the desert near Roswell, New Mexico, 50 years ago. The "bodies" seen were actually anthropomorphic dummies used to test parachutes. Scientists and astronomers are laughing at the Air Force. Modern day believers see UFOs and aliens while the ancients saw dragons, giants and mermaids. Considering that the *Heaven's Gate* followers were certain to board the space ship behind Hale-Bopp, and that a surprising percentage of people still believe that the earth is the center of the universe, the Roswell UFO sightings will live on. Meanwhile, the Chamber of Commerce in Roswell hosted a 50th anniversary fair with visits to the crash site, exhibits and talks at the International UFO Museum and Research Center, and an alien costume contest.

Addenda—

- A prion, a protein smaller than a virus, causes the fatal illness Creuzfeldt-Jakob Disease and can cause an infection without an inflammatory response.
- Although the banana plant may look like a tree, it is actually considered a very large herb.
- The average American eats the equivalent of 28 pigs in his lifetime.

Aloha and keep the faith—rts ■

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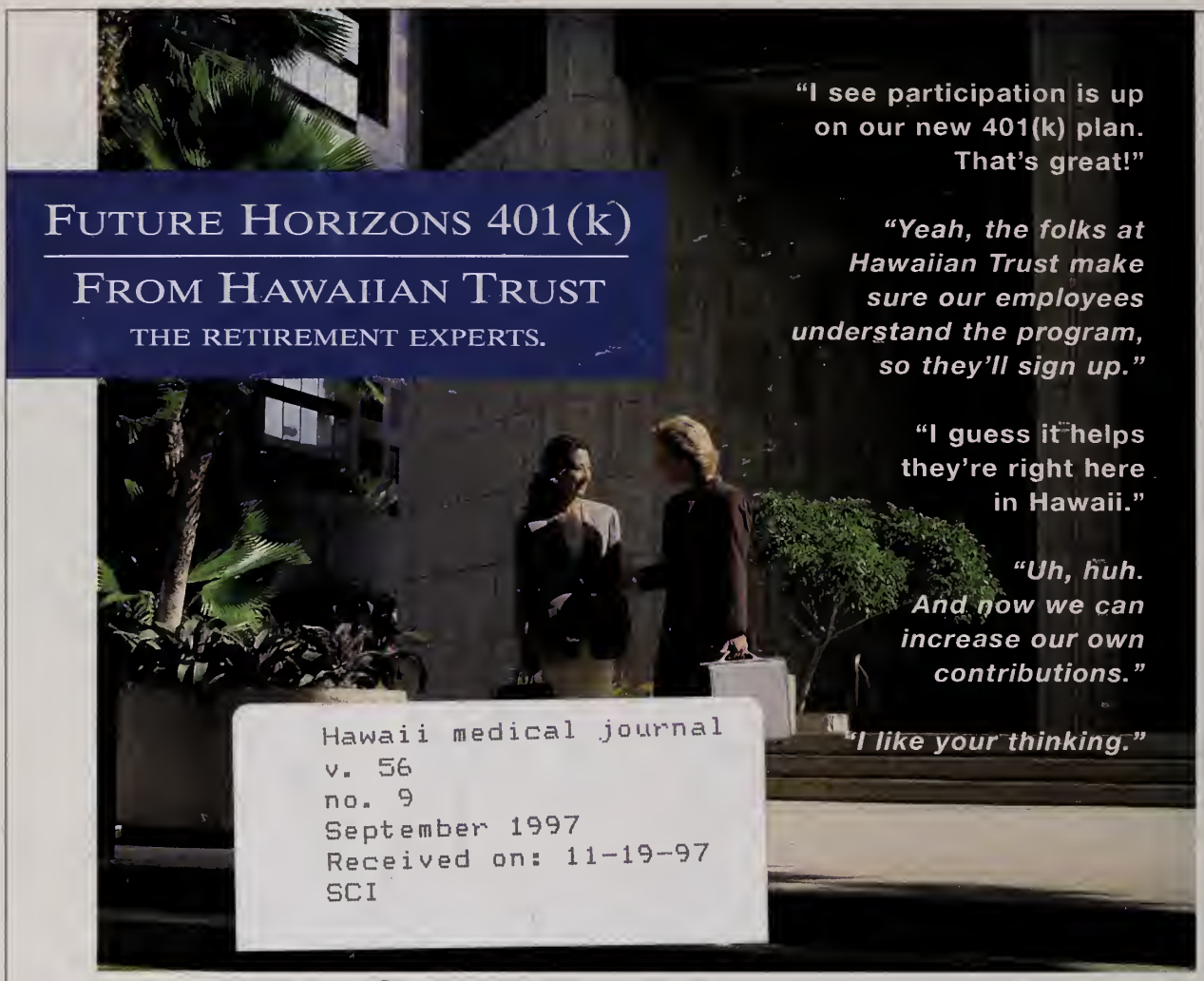
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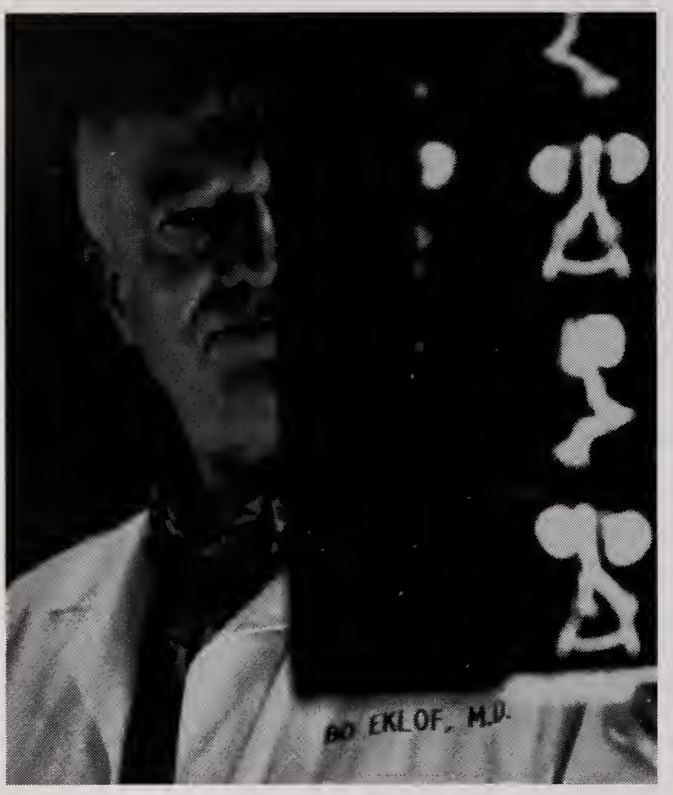
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October 1997 Volume 56, No. 10 ISSN: 0017-8594



Special Issue on Ophthalmology Part II

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– Friday Noon Conference –
Update in Outpatient Treatment of Cutaneous Abscesses: Superficial Cellulitis
William Baumgarten, MD
October 3, 1997, 12:30 - 1:30 p.m.
Doctors Dining Room
Learning Objectives –
At the conclusion, participants will be able to:
- Recognize which patient can be treated as outpatient.
- Manage cutaneous abscesses and cellulitis in outpatient setting.
- Understand current antibiotic therapy protocols.

– Friday Noon Conference –
Ke Ola Ka Hana A Ke Aloha (Health Is Aloha In Action) 25 Years of Providing Health Care to the Waianae Community
Richard P. Bettini, MPH, MA; Richard Friedman, MD; Kauila Clark & Merrie Aipoalani
October 10, 1997, 12:30 - 1:30 p.m.
Doctors Dining Room
Learning Objectives –
At the conclusion, participants will be able to:
- Understand the concept of community health centers.
- Describe the financial impact of Quest Managed Care.
- List the range of services that are available for a community based primary care.

– Friday Noon Conference –
Luncheon
Reducing the Risk of Coronary Heart Disease Through Lipid Reduction
EunMee Lec, Pharm.D., BCPS
October 17, 1997, 12:30 - 1:30 p.m.
Doctors Dining Room
Learning Objectives –
At the conclusion, participants will be able to:
- Appreciate the relationship between cholesterol and coronary heart disease (CHD).
- Describe the National Cholesterol Education Program Guidelines for detection and treatment of high cholesterol.
- Identify the various classes of antihyperlipidemic agents and their effects on the lipid profile.

We would like to acknowledge the Educational Grant from Pfizer Pharmaceuticals.

Please call Fran Smith at 522-4471 for more information.

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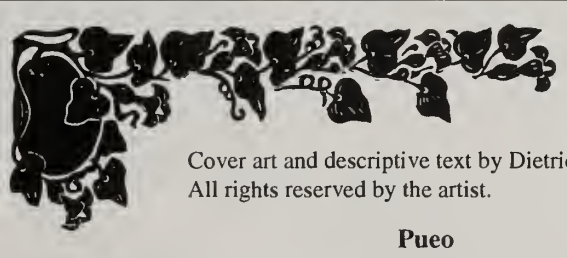
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Pueo

This print depicts a legend at Kaanapali, Maui. The Pueo (owl) saves the girl's brother from a sacrificial altar.

Editorial

Norman Goldstein MD
Editor

Ophthalmology Special Issue Part II

This month we continue our series of manuscripts collected and edited by our **Guest Editor Robert Wong MD**.

Our late editor Fred Reppun MD dubbed Robert Wong the "Catalyst Model." Bob has again proven himself by being the catalyst for these two Special issues on Ophthalmology. These issues will serve as a text book on what has happened, what is happening and what will be happening in Ophthalmology in Hawaii.

Thanks again, Bob for your lectureships and endowments that have energized medical education in Hawaii - and for these two Special Issues.

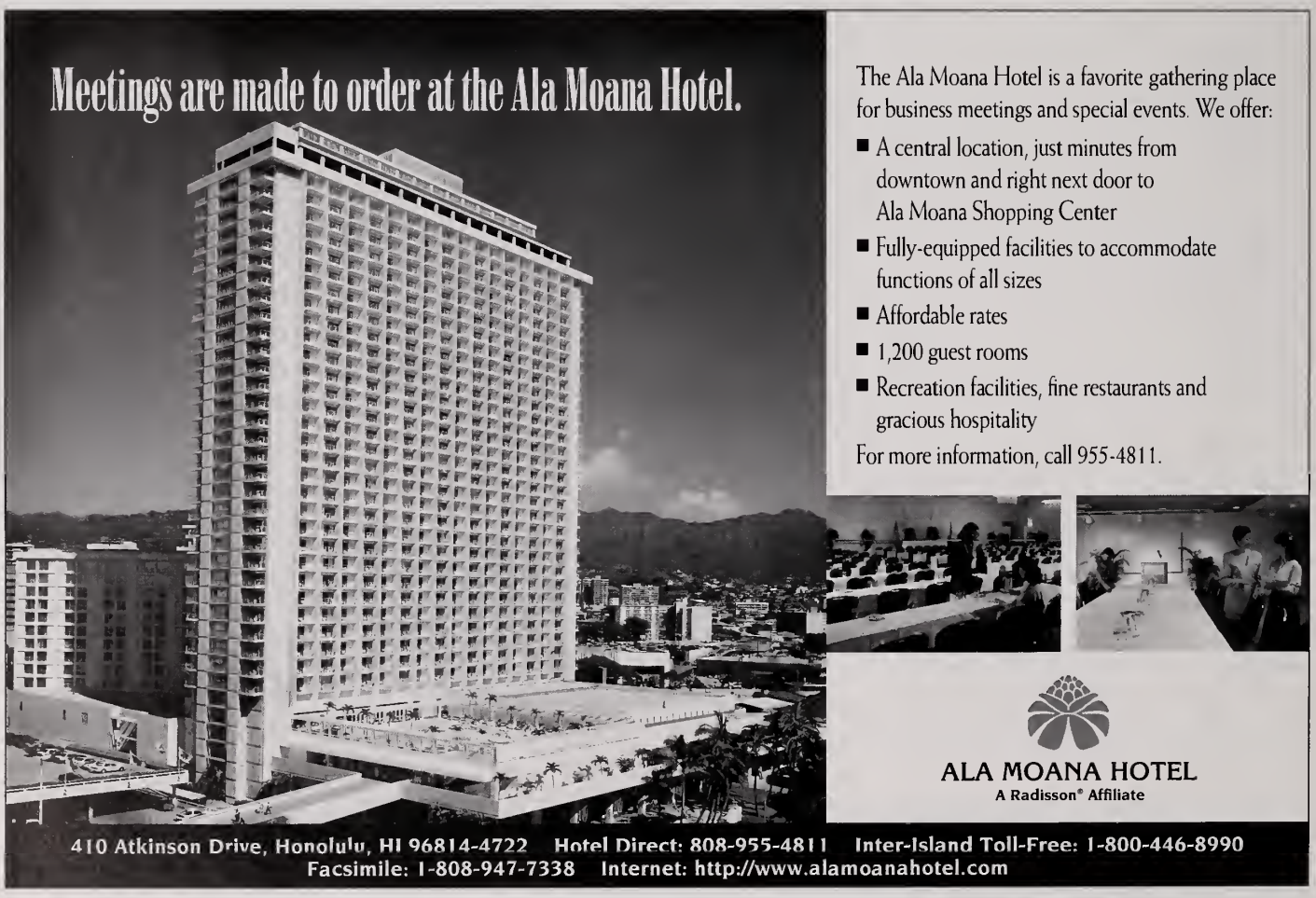
Presidents Message

John S. Spangler MD

Its not too late to come to our annual meeting which is most important for the organization of Hawaii Medical Association. Please make your reservations as soon as possible.

Our budget process will be done on September 5 but will need everyone to evaluate the budget and communicate with Dr Kelley for questions and ideas. Membership remains as always the major income so continue to recruit for HMA.

Legislative activities are most important. A new staff person is being hired to handle the complicated issues facing the health industry. Everyone is needed to help this process.



Medical School Hotline

An Update on the USMLE and Performance of Medical Students at the John A. Burns School of Medicine

Gwen S. Naguwa MD
Associate Dean, Office of Student Affairs

The United States Medical Licensing Exam (USMLE) has now become the only path to licensure in the U.S. and its territories. Although a license to practice medicine is granted by individual state licensing boards, all require, as part of the process, certification of passing scores in all three Steps of the USMLE. With this situation in mind, the John A. Burns School of Medicine (JABSOM), along with 70% of all medical schools, has required students to pass both Steps 1 and 2 in order to receive the MD degree. Since it is also a nationally standardized exam, although highly discouraged by the National Board of Medical Examiners (see related article published in *HMJ* July 1996), much attention has been focused on student performance as an indication of the strength and success of a school's curriculum. Reported here are changes which have been implemented in the Steps 1 and 2 exam, problems which have arisen from the transition, national performance statistics, and an update on the June 1997 performance of the JABSOM Class of 1999 on Step 1. Also included is a brief description of plans for major changes in the exam administration which will take place in 1999.

The USMLE Step 1 exam is designed to assess a student's ability to apply knowledge and understand key concepts of basic biomedical science, with an emphasis on principles and mechanisms of health, disease, and modes of therapy.[1] More recently, however, changes have been implemented to not only insure mastery of the core basic science material, but also the scientific principles required for maintenance through lifelong learning. The exam content is basically organized by organ system (e.g., cardiovascular, reproductive) and process (e.g., metabolism, host defense, influence of emotional and behavioral factors on disease prevention, progression and treatment). However, an increasing number of interdisciplinary topics, such as nutrition and aging, has been added. In addition, there is less emphasis on rote memory and recall of information, and more reliance on a student's ability to interpret and apply data, and apply basic science knowledge to clinical problems.

The emphasis of the Step 2 exam is to determine whether a student can apply basic science knowledge and understand the clinical science necessary to care for patients under supervision, and now includes health promotion and disease prevention.[1] Content is determined by a single integrated content outline that is organized by physician task and disease classification. For example, categories include, in addition to the usual clinical disciplines, Health and Health Maintenance, Understanding Mechanisms of Disease, Principles of Management, Immunologic Disorders, Normal Growth and Deve-

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lopment, Diseases of the Blood and Blood Forming Organs, and Mental Disorders.

As the number of candidates taking the exam and the significance of passing has increased, so has the number of problems associated with test validity, standardization, and security. The most recent security breach was highly publicized by the press, and involved apparent pre-administration access to parts of the exam. This situation was not detected by examiners, but by sophisticated statistical analysis of the performance of individual examinees; as a result, their scores could not be validated, and they will be required to repeat the exam. Another problem with the large number candidates has been the logistics of finding appropriate space and sites, and compounds the security issues related to shipping and maintaining security of the exams until administration. It is hoped that some of these problems will be alleviated by the changes in test administration, plans for which will be presented later in this article.

As evidence of the dramatic increase in the number of individuals taking the exam, for the June 1992 inaugural administration of the Step 1 exam, 15,023 candidates sat for the exam at over 140 testing centers in the United States, its territories and Canada. The 1996 exam was taken by 31,139 individuals at over 200 centers.

The results of the 1996 USMLE Step 1 (June and October), reported in early 1997, showed a 93% pass rate for US and Canadian medical students taking the exam for the first time, compared to 55% for foreign medical students. The overall mean score for the former group was 205 with a standard deviation of 20; the passing score set in 1992 for Step 1 is 176. The mean score for foreign medical students is not available. For Step 2, the overall pass rate for US and Canadian medical students taking the exam for the first time in 1995 (August) - 1996 (March) was 92%, with a mean score of 200± 23. In May 1996, after completion of an in-depth review of the 1992 passing score of 167, the passing standard was raised to 170, effective with the August 1996 administration. Interestingly enough, despite raising the passing score, the passing percentile ROSE from 92% to 95%, although the passing percentage of those repeating the exam declined from 66% to 60%.

Similar to previous JABSOM classes, the Class of 1999 which took the June 1997 exam for the first time performed at or near the national mean both in percent passing (96%) and mean score (211). However, the number of students performing above the 90th percentile rose dramatically from four students in 1995 and 1996, to 11 students. Several hypotheses for this increase have been proposed by the faculty, including the

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How to Become an Ophthalmologist

Preface to Residency Spotlight on Ophthalmology

Robert T. Wong MD
Guest Editor

We are reproducing a Philadelphia news article which gives attention to this subject. The authority is Dr Stephen Wong who is a graduate of our University of Hawaii School of Medicine.

The article lists in detail the competitive admission process to the ophthalmology program, the educational program, and the training process that candidates undergo to become ophthalmologists.

Dr Stephen Wong is a graduate of the two-year University of Hawaii School of Medicine in 1970. He went on to Jefferson Medical College to earn his MD degree in 1972. He served his internship at Jefferson's affiliated Lankaneau Hospital where he learned some basic ophthalmology from the distinguished Robb McDonald MD. He served his three year ophthalmology residency at the renowned Wills Eye Hospital of Jefferson Medical College followed by a fellowship in retinal surgery at the same institution. After completing his training he entered the military service and was assigned as ophthalmologist to the Philadelphia Naval Hospital. He was one of only three retinal surgeons in the entire Atlantic Zone of the U.S. Navy. He joined Temple University School of Medicine after completing his military service.

Incidently, he is the son of guest editor Robert Wong and the brother of Bradley Wong.

*Preface to news article
(Beginning article in October issue—Special Issue on Ophthalmology HML)

impression that the exam has begun to place more and more emphasis on recalling and applying information in a clinical context, which closely parallels the process in our problem-based learning curriculum. Another is that JABSOM students have successfully solved the problem of how to prepare for the boards. The lower numbers in the 90th percentile range (compared to pre-PBL figures) had remained the last major criticism of our problem-based curriculum, except for those who now say, "at or near the mean should not be what we strive for". To these people, one response is that since the major emphasis of problem-based learning is to help students learn how to learn, and the time taken to do this means less time is available to memorize facts, their performance is more of an indication that they have indeed mastered the skill of learning.

For completeness sake it should be reported that performance statistics for the August 1996 administration of Step 2 (Class of 1997), the last one for which complete results are available, again reveal JABSOM students are at or slightly above the mean in total score and percent passing. The number above the 90th percentile, however, has consistently remained the same as pre-PBL figures, approximately 10 students.

Finally, an extremely innovative change in test administration is scheduled to take place in 1999, when all three Steps will become computer-based. Phase 1 of the program will include use of Computer Assisted Sequential Testing (CAST) to shorten the duration of the exam, and implement strong computer-based simulations in the implementation of Step 3. In Phase 2, Step 1 content will be enhanced, standardized patients will be introduced into Step 2, and further use of technology will occur.[2] Field testing using Computer Based Testing (CBT) for the Step 2 exam took place in and around the Chicago, Los Angeles, New Orleans, New York and Philadelphia areas in 1996, and showed that, with some modifications, it was extremely feasible and would address many of the security concerns. Students performed similarly with respect to the test delivery mode, which suggested that moving test items to CBT would not affect results in any systematic way. Another significant finding was that after completing the tutorial and practice items provided as part of the exam, performance was not influenced by prior computer experience. In the interest of our students and residents, JABSOM, with the support of the Dean and the National Boards, has joined a number of other medical schools in preparing to become a CBT site.

References

1. "Report on 1996 USMLE Steps 1, 2, and 3", The *National Board Examiner*, Vol. 44, No. 1, Winter 1997.
2. *Executive Summary*, AAMC/NBME Liaison Committee, July 1997.

Residency Spotlight on Ophthalmology

reprinted from On Call the Newsletter of Temple University School of Medicine
by Damon Pettinelli



Dr. Stephen Wong

Ophthalmology is the surgical specialty concerned with the structure, function, diseases, and abnormalities of the eye. Despite its classification as a surgical specialty, the practice of ophthalmology includes an equally represented focus in medicine.

Dr Stephen Wong, the Director of the Ophthalmology Residency Program at Temple since 1979, points out that the eye is a window to the entire body, and many systemic illnesses, such as diabetes, hypertension, infections, cancer, and AIDS, can be diagnosed by funduscopic examination.

Dr Wong also notes that ophthalmology is a quickly evolving field, with new innovations, such as the use of the laser, and novel microsurgical techniques, continually adding to the ophthalmologists armamentarium.

The Residency Program

An ophthalmology residency is three years in length following an internship year, preferably in medicine. The goal of the first year is to familiarize oneself with the various diagnostic tests performed in ophthalmology, and to learn to discriminate abnormal findings from normal ones. In the second year, residents focus on mastering differential diagnoses and learning various medical and surgical techniques. Third year residents polish the skills learned in the first two years, and also serve as teachers to medical students and younger residents.

A significant amount of time is spent on rotations at centers other than Temple. Residents spend four months at St. Christopher's Hospital for Children, eight weeks at Lankaneau Hospital, and eight months at the Medical Center of Delaware.

First year residents are on call every third night, while second and third year residents take call every sixth night. All residents work approximately 50 hours a week.

After Residency

Approximately one-third to two-thirds of residents go on for further fellowship training in areas such as retinal surgery, glaucoma surgery, and corneal transplantation. The rest go on to private practice, and most remain affiliated with teaching institutions.

Getting a Residency

This is a very competitive specialty. According to Dr Wong, each year, Temple receives approximately 225 applications mostly from graduating medical students, of which, 50 are interviewed for three available positions. Historically, one of these three positions is often filled by an applicant from Temple. It should be noted that strong emphasis is placed on pre-clinical grades and performance on Part I of the National Boards in the evaluation of Ophthalmology.

Why Ophthalmology?

Dr Wong believes that if you like the idea of practicing in a field that strikes a balance between medicine and surgery, in addition to using state-of-the art tools and equipment while performing some of the most delicate surgery in all of medicine, then ophthalmology may be for you. In addition, Dr Wong most enjoys the challenge of diagnosing systemic illness through the examination of the eye.

The Future

New innovations are quickly and continually changing the field of ophthalmology. Tremendous strides have been made in saving the vision of patients with diabetes and glaucoma. Moreover, new surgical advances, such as radiokeratotomy, aimed at correcting myopia and even hyperopia, are making glasses obsolete. These are just some of the examples of innovations that are revolutionizing the field of ophthalmology.

Dr Wong's Weighing of Factors for Ophthalmology Candidates

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Pediatric Ophthalmology and Strabismus Management in Hawaii

Malcolm R. Ing MD, FACS*

Outpatient strabismus surgery was being offered by the Washington D.C. (Costenbader-Parks) Fellowship in Pediatric Ophthalmology and Strabismus as early as the 1960's. This Washington group also championed early surgical alignment for strabismus.[1] Having completed this Fellowship in 1964, upon my return to Hawaii in 1968, I encouraged these techniques at the Queen's Medical Center and the Kauikeolani Children's Hospital. The operating microscope for adult cataract surgery was becoming popular throughout the United States in the1970's, and it was my belief that this technique could also be used in strabismus repair and pediatric cataract surgery. Of particular importance in pediatric cataract surgery, was the development of suction-cutting devices for the lens and vitreous in the early 1970's. The first course taught to local ophthalmologists (at the Waikiki Sheraton) on the modern vitrector (known as the Ocutome) was by Dr's Conner O'Malley, Ron Michaels and Steve Charles. This course led to the purchase of an Ocutome vitrector unit by Queen's Hospital in 1972. A new ophthalmic surgical era was introduced in congenital cataract surgery because the vitrector could prevent secondary clouding of the pupillary space by removing the posterior capsule and anterior vitreous. This technique of removing potential barriers to a clear visual axis is still very much in vogue today. The treatment of congenital cataracts was also enhanced by the development of "extended wear" contact lenses in the 1980's. These contact lenses need not be removed daily and were oxygen permeable. The Sauflons extended wear contact lens from England (later distributed by Bausch and Lomb) and the Dow Chemical silicone lens replaced the bulky aphakic spectacles. They are highly popular in visually rehabiliting infant eyes after cataract surgery.[2]

Shortly after starting practice in Hawaii, it became apparent that exotropia was more prevalent in Asian patients and esotropia in Caucasian patients. This was verified with the help of Dr Robert Worth and his associates at the University of Hawaii School of Medicine.[3]

In the 1980's the optimum time for the surgical alignment of congenital esotropia was being debated. Laboratory evidence favored earlier visual rehabilitation and surgical alignment. Hubel and Weisel, who won the 1982 Nobel prize in medicine for their investigative work, had completed a series of experiments closing the lids of young mammals. The data supported the concept of a physiological time window in animals and humans, when the visual cells could be stimulated and developed. Permanent amblyopia would develop beyond this time window - if the visual defect had not been treated. In 1978 I embarked on a three year multi-center, independent, masked study of 160 surgically aligned congenital esotropia patients from the practices of 7 ophthalmologists (five in the United States, one in Canada and one in Europe). This was a "have prisms, will travel" study, in which motor and sensory tests on these children were personally conducted by me at various institutions. With the help of Dr Robert Worth, who did the statistical analysis of the collected data, it was proven that alignment before age two produces significantly better functional results (such as depth perception and fusion) compared to alignment after age two ($p = < 0.001$).[4] Thus, a longstanding controversy in strabismus surgery was brought to a close.

Botulinum injection of the medial rectus muscle for treatment of congenital esotropia was introduced in the mid 1980's by Dr Alan Scott of San Francisco. However, a long term follow-up study published in 1993 in which I examined patients aligned by botulinum by Dr Scott and Dr Elbert Magoon of Canton, Ohio, showed that the functional results of botulinum injection were inferior to surgical alignment.[5] Nevertheless, botulinum injection into overacting lid muscles such as in blepharospasm and hemifacial spasm, did prove helpful and remains popular even today. In addition, botulinum injection of rectus muscle (to avoid surgical removal of a third rectus muscle that may cause interior segment necrosis) is still a useful adjunct in strabismus surgery.

The issue of surgical alignment before ages 6 to 24 months was introduced by Dr Ken Wright of California in a 1994 study.[6] Doctor Wright's paper encouraged me to conduct another outcome study, in which the children I examined were aligned very early by Dr Wright and by Dr Gene Helveston of Indiana. This study showed that, even with alignment at ages three to five months, perfect stereopsis (depth perception) was a very rare outcome (1 out of 16

*Clinical Professor of Surgery
Division of Ophthalmology
Department of Surgery
University of Hawaii
John A. Burns School of Medicine

patients).[7] Even when surgically aligned, before 6 months the binocular condition lacks refined stereo-acuity, however fusion and gross stereopsis are achieved in the vast majority of patients.

Recently, a prospective, randomized, multicenter study was initiated to determine if alternating occlusion prior to surgical alignment could produce better binocular vision. Honolulu was selected as one of fifteen research centers, along with major eye institutions in Los Angeles, New York, San Francisco and Baltimore. This study is only the second prospective, multi-center, randomized investigation ever to be organized in the field of strabismus management in the United States. The results will be determined independently in five years when the children are old enough to perform sensory tests, such as depth perception and fusion.

At present, pediatric ophthalmology is advancing in the use of intraocular lens in children as techniques are refined. Indeed, the use of intraocular lenses for children appears to be the new frontier in the 1990's. The long term effects of intraocular lenses in children, are not known. However, there is reason to believe that in selected cases successful implantation with minimal complications can result in satisfactory vision for many of these children. In summary, pediatric ophthalmology and strabismus management in Hawaii, like the other subspecialties of ocular disease, offers the same quality care as the major eye institutions on the mainland. With the use of earlier diagnosis and treatment, and more precise modern surgery, children and adults with the stigma of uncorrected strabismus should be a rarity in our community.

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Current Status of the Treatment of Cataract

Gerald D. Faulkner MD, FACS

Cataract, a leading cause of blindness, has been successfully treated by surgery since ancient times. Surgical methods have evolved from couching, to extraction, to phacoemulsification. Cataract surgery is now an outpatient procedure that can be performed with topical anesthesia. Intraocular lens implants restore natural vision without thick glasses and contact lenses. Current procedures are highly successful in restoring vision.

Cataracts have been the leading cause of blindness throughout history. They have been treated surgically since ancient times, but the most significant progress in treatment has occurred within the last thirty years.

A cataract is a clouding of the natural lens of the eye. As a cataract advances it can cause changes in one's eyeglass prescription, i.e. blurring, increased glare, increased sensitivity to light, and eventually total blindness. While radiation, steroid therapy, trauma, chronic uveitis, and some syndromes are known causes, most cataracts are related to aging and unknown etiology.

The first written account of cataract treatment was a description of the couching procedure by Celsus, Roman (c.25BC-AD50). He described how a sharp needle was used to penetrate the eye and push the cataract out of the pupil. This ancient procedure is still practiced today in some primitive areas of Africa and India. Amnar (1000 AD), an Arabian, describes removal of a soft cataract by suction through a hollow needle.[1]

A French surgeon, Jaques Daviel, performed the first known cataract extraction on a human eye in 1750. Like most new surgical procedures, it took a long time, in this case almost a 100 years, before it was widely accepted throughout the civilized world. It became embroiled in nationalism with the French favoring extraction and the British continuing to do couching. The Germans then joined the fray with a modification of couching called reclination. In 1864, von Graefe modified the incision to reduce gaping of the wound as no sutures were used. These incisions for cataract extraction extended halfway around the limbus of the cornea, and were allowed to heal without the benefit of sutures. Sutures to close the incision were not used until the early twentieth century.

The extraction procedure of cutting the lens capsule and washing out the contents was called extracapsular cataract extraction (ECCE). Another way was to remove the cataract with its capsule or intracapsular cataract extraction (ICCE). This method is as old as ECCE but did not become popular until early this century.

Cataract surgery was done without anesthesia until topical cocaine was first used in 1884. General ether anesthesia was begun about the same time. In 1928, retrobulbar injection, which anesthetized and immobilized the eye, was introduced. The eyelids were immobilized directly either by injection of the eyelid muscles or by blocking the ophthalmic division of the VIIth nerve. Currently, some surgeons perform cataract surgery through small corneal incisions using only topical (eye drops) anesthesia.

With the natural lens removed, most eyes cannot focus. While gross vision (where only large blurred objects could be seen) was an improvement over total blindness, the more developed societies used eyeglasses to replace the focusing power of the natural lens. These eyeglasses were quite thick and powerful. They magnified images about 30%, affected mobility and reduced the field of vision. Aphakic patients were totally dependent on these glasses. Thus, as we entered the second half of the twentieth century, cataract surgery, while curing blindness, imposed the disability, of distorted vision from aphakic glasses. Contact lenses were an alternative for some, but most elderly patients were unable to or unwilling to use them.

In 1949, Harold Ridley, a British ophthalmologist, fashioned a lens from polymethylmethacrylate (PMMA) and inserted it into the eye of a patient following cataract removal. In 1968, Charles Kelman, an U.S. ophthalmologist, invented an instrument to perform an extracapsular (ECCE) cataract extraction (It could emulsify the lens material with an ultrasonically vibrating needle and remove the lens material by suction[2]). This procedure is called phacoemulsification or Kelman phacoemulsification (KPE). Both the Ridley and Kelman procedures had a stormy course of development and created as much controversy as the couching versus extraction procedures of the 18th century. Many ophthalmologists considered these procedures malpractice because of the high rate of complications during their early development. However, dedicated individuals persisted in using and improving these procedures. A survey of members of the American Society of Cataract and Refractive Surgeons found 87% of cataract surgeons using phacoemulsification and almost 100% inserting intraocular lenses.[3]

The refinements in extraction and the development of safe intraocular ocular lens implants have resulted in better vision, faster and more natural rehabilitation and higher success rates. Current methods of cataract surgery are dependent on technological advances. The microsurgical procedures are now performed by using specialized operating microscopes, diamond knives, and solid state phacoemulsification instruments. The axial length of the eye is determined by ultrasound and the corneal radius is used to compute lens power.

Cataract surgery can be performed on most patients through an incision of 3 mm or less. If this incision is made through the avascular cornea as many surgeons are now doing, there is no

bleeding, and no need to discontinue anticoagulants. The incisions are usually self-sealing and no sutures are required.

Today, most intraocular lenses are made of polymethylmethacrylate (PMMA), the same material used by Ridley in his first lens implant. In 1984, a foldable intraocular lens made of silicon was introduced. This enabled the surgeon to insert the intraocular lens through the 3-mm incision used for phacoemulsification (KPE). Prior to the introduction of the foldable implant, the incision had to be 6 mm or greater to insert the lens implant and often required sutures. Large incisions and the use of sutures can delay visual rehabilitation by causing distortion of the corneal curve and resultant distortion of vision. Recently flexible PMMA lenses have been introduced thus widening the choice of implants.

Serious complications of cataract surgery have been reduced but not eliminated. Sight threatening complications such as endophthalmitis, expulsive hemorrhage, retinal detachment and corneal clouding still occur but less frequently. Progress has been made in the prevention and treatment of these and other complications.

Current methods of cataract surgery result in significant visual improvement in 95% of patients who have no other ocular pathology. Eighty nine percent of a large series of cataract patients reported significant improvement in their quality of life.[4] Sight reducing complications occur in about 2%.[5] Patients who have cataract surgery not only have restoration of normal vision, but some have better vision than they had before the cataract developed. Patients who had significant nearsightedness, farsightedness and astigmatism can find these problems lessened or eliminated by cataract surgery with intraocular lens implantation. In some European countries and in increasing numbers in the U.S., patients with severe near- and farsightedness are having their lenses replaced with an intraocular lens even though they do not have a cataract.

Thirty years ago, cataract surgery was almost always performed in a hospital operating room. Patients were hospitalized as long as ten days and their physical activities limited for up to six weeks. Only then were they fitted with aphakic glasses and their vision restored; though the thick glasses magnified and distorted their vision. Now cataract surgery is typically performed in an ambulatory surgery center. A small corneal self-sealing incision is used and the surgery performed under topical anesthesia. The patient can go home twenty minutes after surgery without an eye patch. Patients rarely need analgesics. Some experience good vision without glasses the next day, and most within a few days. There are essentially no restrictions on physical activity, and patients resume normal work and recreation 24 to 48 hours postoperatively. Cataract surgery is extended to almost anyone who needs it; at any age and even in poor health.

What about the future? Until a medical cure for cataract is found, treatment improvement will be refinements in surgical technique and in refractive correction.

Multifocal lens implants have been under investigation for several years.[6] Such lens would focus both near and far, and totally eliminate the need for eyeglasses. If these lenses are perfected, people reaching the "bifocal age" might elect to have their clear natural lens replaced with an artificial multifocal implant.

Since the inception of phacoemulsification, people have thought that cataracts are removed with laser. Only recently have phacoemulsification-like instruments been developed which utilize laser instead of ultrasound to breakup the cataract. Laser may offer safer surgery especially for very hard cataracts that challenge current ultrasound instruments.

Current surgery utilizes the capsule of the natural lens to hold the implanted lens. The capsule contains cells that generate lens fibers. In about 50% of cataract patients, these lens fibers will cause clouding of the capsule. This is termed a "secondary cataract "or "after cataract." YAG laser currently treats it by opening the capsule. A bioengineering product to kill these cells is under development and shows good preliminary results.

While 3 mm may seem like a small incision, further reduction of incision size is the goal of many researchers. This involves not only smaller instruments entering the eye, but lens implants that will pass through the smaller incision.

The cataract treatment is one of the great success stories of the last half of the twentieth century. It is interesting to note the treatment cycle: the small incision of ancient times (couching) to the large incision cataract extraction methods; the modern small incision phacoemulsification which utilizes suction (Arabs 1000 AD). Likewise, anesthesia for cataract surgery progressed from no anesthesia to topical cocaine (1884) and general anesthesia, to local retrobulbar injection anesthesia and now back to topical anesthesia.

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Diabetic Retinopathy

John H. Drouilhet MD

Diabetic Retinopathy is the leading cause of new blindness in the 25 to 74 year age group in the United States. The diabetic patient has a twenty-five times greater risk of developing blindness than the non-diabetic patient. Only 50 % of all patients with diabetes mellitus have actually been diagnosed.[1] The Community Epidemiologic Work Group for Diabetes Mellitus in Hawaii showed a prevalence of 25.2 per 1000 to 63 per 1000 persons based on self-reported data. The State Blind Registry for 1992-1993 showed diabetic retinopathy as the second leading cause of all new blind cases (20.9%).[2] Diabetic retinopathy is a significant cause for concern in Hawaii in regard to patient quality of life and socioeconomic concerns.

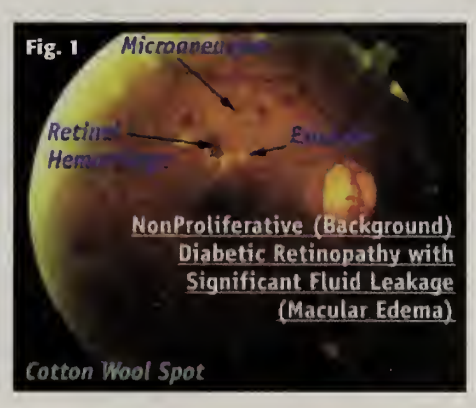
Various factors have been studied in the pathophysiology of Diabetic Retinopathy to include aldose reductase, growth hormone, blood rheology abnormalities, blood viscosity,[1] vascular endothelial growth factor,[3] etc. It is as yet not fully understood how much each of these (or other unknown factors) contributes to the retinal vascular disease process.

Duration of diabetes mellitus is critical relative to the onset of retinopathy. Type I diabetics usually have no retinopathy until five years after diagnosis. By 15 years into the disease 90% will have retinopathy. Type II diabetics can present with retinopathy on initial diagnosis. The recommendation for dilated eye examination in the Type I diabetic is yearly once the patient has had diabetes for five years. Type II diabetics should be examined yearly from time of diagnosis.[1]

Definite risk factors for diabetic retinopathy include duration of disease, poor glucose control, hypertension, and renal disease.[4] As 87% of patients with advanced retinopathy have nephropathy and/or neuropathy, patients with nephropathy and /or neuropathy definitely need an ophthalmologic exam.[5]

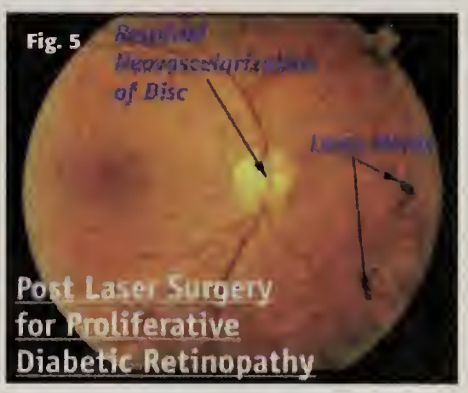
Diabetic Retinopathy has two major classifications—Non-Proliferative Diabetic Retinopathy (NPDR) and Proliferative Diabetic Retinopathy (PDR).[1] In NPDR one sees retinal microaneurysms, blot hemorrhages, cotton wool spots, intraretinal microvascular abnormalities, and retinal edema (Fig 1). Edema affecting the macula causes loss of central (reading) vision. PDR is the more advanced stage occurring when the retina starts to lose its blood supply. The eye responds by growing new blood vessels on the optic nerve or retina (Fig 2). These fragile new vessels bleed, filling the vitreous cavity. Scar tissue accompanies the neovascularization and can cause retinal detachment (Fig 3).

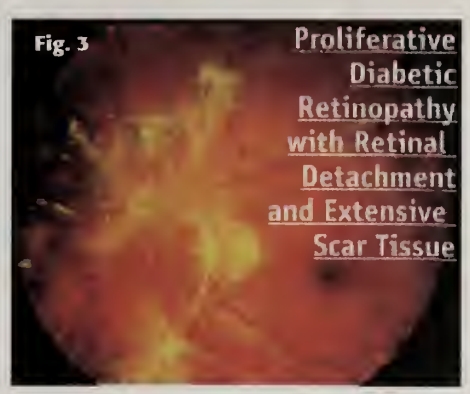
To combat Diabetic Retinopathy, surgical strategies were developed in which Laser surgery treats macular edema and causes atrophy of the neovascularization. Vitrectomy surgery removes













dense vitreous hemorrhage and relieves traction retinal detachment from scarring.

The Early Treatment Diabetic Retinopathy Study (ETDRS)[6] demonstrated a 50% reduction in loss of vision with appropriate laser surgery for clinically significant macular edema (Fig 4). This study also showed that aspirin did not reduce progression of diabetic retinopathy nor increase the risk of vision loss from vitreous hemorrhage.[7] The Diabetic Retinopathy Study showed a 50-60% reduction in vision loss for timely laser surgery in patients with Proliferative Diabetic Retinopathy (Fig 5).[8] The Diabetic Retinopathy Vitrectomy Study showed better visual result with early vitrectomy surgery in Type I Diabetics with nonclearing vitreous hemorrhage (Fig 6).[9]

The Diabetes Control and Complications Trial (DCCT) showed delay in onset and slower progression of Diabetic Retinopathy, nephropathy, and neuropathy. There was a 50% reduction in amount of laser surgery for Diabetic Retinopathy in tightly controlled diabetics.[10]

Diabetic Retinopathy is the major cause of new blindness in working Americans. The longer the duration of diabetes, the greater the risk of retinopathy. Excellent serum glucose, blood pressure, and cholesterol control[11] delay and decrease the severity of retinopathy. Timely laser surgery reduces vision loss by 50%. It is the responsibility of all physicians in partnership to diagnose and properly manage the diabetic patient.

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Correction

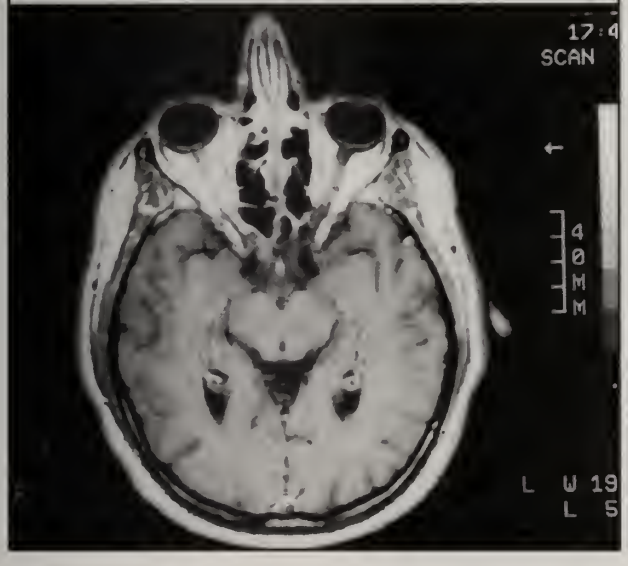
Please note that the above manuscript on Diabetic Retinopathy by John H. Drouilhet MD, was originally published *(Haw Med. J. 1997;56:241-244)* with incorrect illustrations. We reprint the corrected manuscript and illustrations in its entirety. We apologize to the author and to the reader for the error.

Recent Advances in the Management of Optic Neuritis

Scott Kortvelesy MD

Optic neuritis is an acute demyelinating disease of the optic nerve. The typical patient reports a unilateral reduction in vision progressing over several days, commonly associated with pain on eye movement. The visual acuity usually "bottoms out" at 7-14 days and then slowly recovers over 6-12 weeks. Permanent reduction of visual acuity and even blindness may occur. Diagnosis is based on the patient history, reduced visual acuity, color vision and visual field, as well as the presence of an afferent pupillary defect (Marcus-Gunn pupil). Disc swelling is variable. Although MRI may visualize a signal abnormality along the optic nerve (see Fig. 1), it is usually not necessary to make the diagnosis.

Fig. 1.—Axial TI - weighted MRI scan showing signal enhancement of entire length of right optic nerve.



While it may be an isolated event, optic neuritis takes much larger significance from its association with multiple sclerosis. Long term studies have shown that 15 years after an attack of optic neuritis, 34% of men and 74% of women will develop multiple sclerosis.[1]

The Optic Neuritis Treatment Trial is a national collaborative study funded by the National Eye Institute of Bethesda, Maryland. It is a randomized, placebo controlled trial of 457 patients to look at the natural history of no treatment versus steroid treatment of optic neuritis.[2]

The mean age of patients recruited for the study was 32 years, and 77% were women.[3] The optic nerve was ophthalmoscopically normal in 65% and edematous in 35%. The visual loss was associated with pain in 92% of cases. Magnetic resonance imaging showed changes "consistent with" demyelinating disease in 49% of patients. As expected, nearly all of the patients (98%) had visual field defects in the affected eye, but the "unaffected" fellow eye had a surprisingly high rate of abnormal visual fields at 48%.

The optic neuritis treatment trial randomized patients with acute optic neuritis to one of three groups: 1) Prednisone 1 mg/kg/day for 14 days, 2) Intravenous methylprednisolone 1 gm/day for 3 days followed by 11 days of oral prednisone at 1 mg/kg/day, or 3) oral placebo for 14 days. Patients were then followed for changes in visual acuity, color vision, visual field and contrast sensitivity.

The study concluded that while treatment with intravenous methylprednisolone hastened the visual recovery, there was no long-term visual benefit over placebo. Surprisingly, the study also found that those patients treated with oral prednisone alone had an increased risk of recurrent optic neuritis. Therefore, treatment of the demyelinating form of optic neuritis with prednisone alone is not recommended.

Two year follow-up data indicated that those patients with signal abnormalities on brain MRI had a much higher risk for the development of definite multiple sclerosis.[4] By three years, the risk for definite MS was 43% for those who had three or more lesions on the baseline brain MRI.[5] This compared with a 28% risk among those with one or two signal abnormalities and only a 9% risk in those with normal scans or scans with nonspecific changes at baseline. The two year data also strongly suggested that intravenous methylprednisolone reduced the rate of development of multiple sclerosis compared with placebo (7.5% versus 16.7%). Unfortunately this protective effect of methylprednisolone is temporary. Preliminary four year follow-up data showed that clinically definite multiple sclerosis developed in 25% of those treated with intravenous methylprednisolone versus 27% of those treated with placebo.

Based on these results and in view of the availability of new medications such as Betaseron and Avonex for treatment of multiple sclerosis, it seems reasonable to recommend an MRI scan of the brain on any new patient with acute optic neuritis. If the MRI shows evidence of demyelinating disease or if the patient needs or desires a quicker recovery of vision, then intravenous methylprednisolone should be offered.

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Pseudomembranous colitis has been reported with nearly all antibacterial agents, including erythromycin, and may range in severity from mild to life-threatening. Therefore, it is important to consider this diagnosis in patients who present with diarrhea subsequent to the administration of antibacterial agents.
Treatment with antibacterial agents alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by Clostridium difficile is one primary cause of "antibiotic-associated colitis."
After the diagnosis of pseudomembranous colitis has been established, therapeutic measures should be initiated. Mild cases of pseudomembranous colitis usually respond to drug discontinuation alone. In moderate to severe cases, consideration should be given to management with fluids and electrolytes, protein supplementation and treatment with an antibacterial drug clinically effective against C. difficile colitis.

PRECAUTIONS
General: For topical use only; not for ophthalmic use. Concomitant topical acne therapy should be used with caution because a possible cumulative irritancy effect may occur, especially with the use of peeling, desquamating or abrasive agents. If severe irritation develops, discontinue use and institute appropriate therapy.
The use of antibiotic agents may be associated with the overgrowth of nonsusceptible organisms including fungi. If this occurs, discontinue use and take appropriate measures.
Avoid contact with eyes and all mucous membranes.
Information for Patients: Patients using BENZAMYCIN® Topical Gel should receive the following information and instructions:
1. This medication is to be used as directed by the physician. It is for external use only. Avoid contact with the eyes, nose, mouth, and all mucous membranes.
2. This medication should not be used for any disorder other than that for which it was prescribed.
3. Patients should not use any other topical acne preparation unless otherwise directed by physician.
4. Patients should report to their physician any signs of local adverse reactions.
5. BENZAMYCIN® Topical Gel may bleach hair or colored fabric.
6. Keep product refrigerated and discard after 3 months.

CARCINDGENESIS, MUTAGENESIS AND IMPAIRMENT DF FERTILITY
Data from a study using mice known to be highly susceptible to cancer suggests that benzoyl peroxide acts as a tumor promoter. The clinical significance of this is unknown.
No animal studies have been performed to evaluate the carcinogenic and mutagenic potential or effects on fertility of topical erythromycin. However, long-term (2-year) oral studies in rats with erythromycin ethylsuccinate and erythromycin base did not provide evidence of tumorigenicity. There was no apparent effect on male or female fertility in rats fed erythromycin (base) at levels up to 0.25% of diet.
Pregnancy: Teratogenic Effects: Pregnancy CATEGDRY C: Animal reproduction studies have not been conducted with BENZAMYCIN® Topical Gel or benzoyl peroxide.
There was no evidence of teratogenicity or any other adverse effect on reproduction in female rats fed erythromycin base (up to 0.25% diet) prior to and during mating, during gestation and through weaning of two successive litters.
There are no well-controlled trials in pregnant women with BENZAMYCIN® Topical Gel. It also is not known whether BENZAMYCIN® Topical Gel can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. BENZAMYCIN® Topical Gel should be given to a pregnant woman only if clearly needed.

Nursing Women: It is not known whether BENZAMYCIN® Topical Gel is excreted in human milk after topical application. However, erythromycin is excreted in human milk following oral and parenteral erythromycin administration. Therefore, caution should be exercised when erythromycin is administered to a nursing woman.

Pediatric Use: Safety and effectiveness of this product in pediatric patients below the age of 12 have not been established.
ADVERSE REACTIONS
In controlled clinical trials, the total incidence of adverse reactions associated with the use of BENZAMYCIN® Topical Gel was approximately 3%. These were dryness and urticarial reaction.
The following additional local adverse reactions have been reported occasionally: irritation of the skin including peeling, itching, burning sensation, erythema, inflammation of the face, eyes and nose, and irritation of the eyes. Skin discoloration, oiliness and tenderness of the skin have also been reported.

DDSAGE AND ADMINISTRATION
BENZAMYCIN® TopMical Gel should be applied twice daily, morning and evening, or as directed by a physician, to affected areas after the skin is thoroughly washed, rinsed with warm water and gently patted dry.

Important to the Pharmacist
Prior to dispensing, tap vial until powder flows freely. Add indicated amount of ethyl alcohol (70%) to vial (to the mark) and immediately shake to completely dissolve erythromycin. Add this solution to gel and stir until homogeneous in appearance (1 to 1½ minutes). BENZAMYCIN® Topical Gel should then be stored under refrigeration. Do not freeze. Place a 3-month expiration date on the label.

NDTE: ***Prior to reconstitution, store at room temperature between 15° and 30°C (59° – 86°F).***
After reconstitution, **store under refrigeration between 2° and 8°C (36° – 46°F).**
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Ocular Manifestations of the Acquired Immunodeficiency Syndrome

Byron M.W. Wong MD*

Ophthalmologic findings in individuals with the acquired immunodeficiency syndrome (AIDS) are fairly common. A noninfectious microvasculopathy of the retina is the most frequent manifestation. Cytomegalovirus (CMV) retinitis is the opportunistic infection most likely to cause visual loss and must be differentiated from toxoplasmosis or herpetic retinitis. Ganciclovir, foscarnet, and cidofovir are the agents available to slow the progression of CMV retinitis, but they have significant toxicities.

Scope of the problem

Although Hawaii is a relatively small state, the annual rate of acquired immunodeficiency syndrome (AIDS) of 16.7 per 100,000 people placed Hawaii at 19th among the 50 states and District of Columbia in 1996.[1] The Hawaii Department of Health estimates that approximately 2,300 to 3,200 individuals infected with human immunodeficiency virus (HIV) live in the islands.[2] This represents 0.25 percent of the population or one of every 400 persons.

Over 70% of patients with AIDS can develop ocular manifestations, and 90% of patients have ocular disease at autopsy.[3] Diseases of the anterior segment of the eye include: molluscum contagiosum, Kaposi's sarcoma, dry eyes, herpes zoster ophthalmicus, herpes simplex keratitis, and microsporidiosis. The retina and choroid can show involvement with "HIV retinopathy" (retinal hemorrhages, microvascular abnormalites, nerve fiber layer infarcts), cytomegalovirus (CMV), herpes simplex, herpes varicella-zoster, syphilis, toxoplasmosis, pneumocystis, cryptococcus, mycobacteria, histoplasmosis, candida, and endogenous bacterial retinitis.[4,5] Vascular occlusions are possible.[6] Loss of visual function on psychophysical testing without infectious retinopathy has been studied.[7] Optic neuropathy, cranial nerve palsies, orbital lymphoma, and orbital infections can be seen.

Medications used to treat the HIV patient can result in ocular side effects. Rifabutin-associated iritis[8] and Didanosine related retinal pigment epithelial atrophy have been reported.[9]

*Assistant clinical professor
Department of Surgery
University of Hawaii
John A. Burns School of Medicine

HIV retinopathy

The most common ophthalmoscopic finding is the microvascular changes of HIV retinopathy. The cotton-wool-spots (representing nerve fiber layer infarcts), hemorrhages, and microvascular changes do not represent an opportunistic infection. They are usually asymptomatic and will resolve spontaneously. For a patient with known HIV infection, they have no prognostic value and need only to be distinguished from an infectious lesion.

The differential diagnosis of cotton-wool-spots and hemorrhages is nonspecific, and includes: HIV retinopathy, diabetes, hypertension, collagen vascular disease, retinal vascular occlusions, carotid artery disease, anemia, high altitude retinopathy, dysproteinemias, leukemia, radiation, pancreatitis, and systemic infections.

CMV retinitis

The most common ocular infection and cause for visual loss is CMV retinitis which can affect up to 30% patients with AIDS.[10] CD4+ T-cell counts are usually below 0.05 x 10^9/L.[11] Occasionally, CMV retinitis may be the presenting opportunistic infection. The patient may present with symptoms of floaters, flashing lights, a visual field defect, or blurred vision. The retinitis may also be discovered on a screening ophthalmoscopic examination. Lesions may be asymptomatic because they are small and in the peripheral retina, or an individual may not be paying attention to the sight in each eye separately.

The diagnosis of CMV retinitis is based on the clinical appearance of a focal necrotizing retinitis There are multiple, granular, white foci of retinal whitening with areas of confluence often with associated hemorrhage. The red and white appearance has been likened to that of a cheese pizza (Figure 1). A small area of retinitis may resemble a cotton-wool-spot, but a nerve fiber layer infarct will resolve in time. Untreated CMV retinitis spreads like a brush fire. Active, expanding borders leave behind atrophic retina and mottled retinal pigment epithelium.

Treatment of CMV retinitis

Medications against CMV approved by the Federal Drug Administration at this time are ganciclovir, foscarnet, and cidofovir. All have been shown to effective in slowing the progression of retinitis. Successfully treated retinitis shows chorioretinal scarring with no active granular retinal whitening (Figures 2, 3). Fibroglial tissue, refractile particles, or white plaques can sometimes occur. The drugs are virostatic and must be taken indefinitely.

Ganciclovir was developed first, and therefore it has had the most use. This nucleoside analogue is available intravenously, orally, or as an implant into the vitreous cavity. The Hawaii AIDS Clinical

Fig. 1.—Active CMV retinitis and optic neuritis in the left eye of a 39-year-old man with AIDS. White, necrotizing retinitis with associated hemorrhage. Note the granularity at the borders.

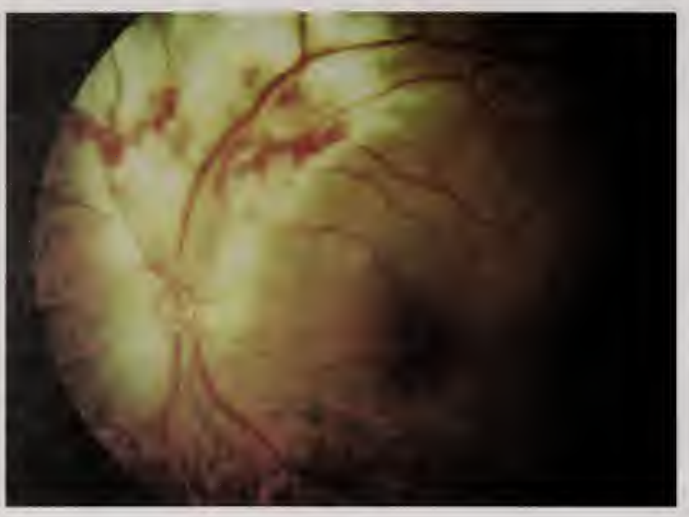


Fig. 2.—Inactive CMV retinitis with atrophic retina and pigment epithelial three months following treatment. Same eye as figure 1. Vision remains 20/20, but there is a persistent inferotemporal visual field defect in the left eye.

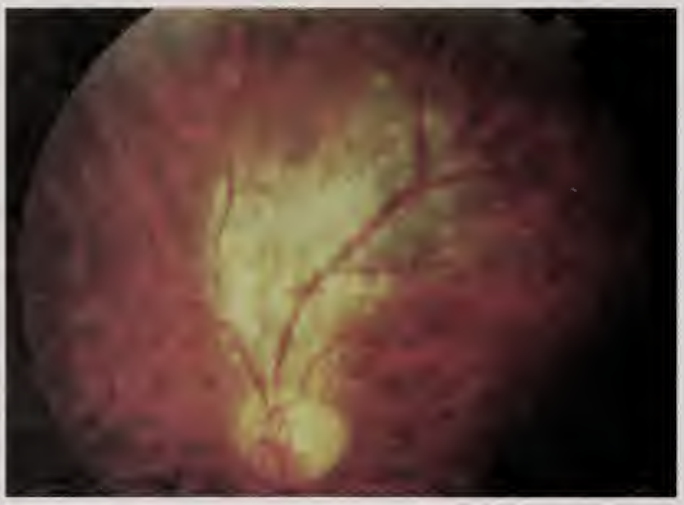


Fig. 3.—Inactive CMV retinitis with atrophic retina and pigment epithelial mottling in the inferior periphery of the left eye of a 34-year-old man with AIDS. Yellow object to the right is a partial view of a ganciclovir implant in the viteous cavity.



Research Program (HACRP) with participating local ophthalmologists was involved in two of the clinical trials involving oral ganciclovir (Syntex ICM 1653 and ICM 1774). The intravenous and oral form should be taken daily for maximal efficacy. Bone marrow suppression is a major side effect. The intravitreal implant involves an operation to suture a sustained-release device into the vitreous cavity. The drug diffuses through a polyvinyl alcohol coating and is effective for five to eight months. Systemic toxicity is avoided, but there is no treatment outside the eye or prophylaxis for the fellow eye.

Foscarnet is administered intravenously also on a daily basis. Infusion times are more lengthy than ganciclovir to avoid the side effects of renal toxicity and metabolic shifts.

Cidofovir is the most recently available agent. It has the advantage of having a maintenance schedule of an intravenous infusion once every two weeks. Probenecid is used to help decrease the nephrotoxicity. Ocular hypotony is possible.

Relapse of CMV retinitis after initial response to an anti-CMV medication is common and drug testing is measured by median time to progression (50 days for intravenous ganciclovir[12], 93 days for foscarnet[13], 120 days for cidofovir[14], 226 days for the ganciclovir implant[15]). Reinduction with the same drug or switching to another agent may again slow the retinitis. Combination treatment may be effective, but the trade-off is an increase in drug toxicities. Additional drugs are under investigation. Physicians in this state through the HACRP were involved with MSL 109 which is a monoclonal antibody against CMV. This study was terminated in 1997 due to preliminary data showing lack of efficacy and possibly increased mortality.

Retinal detachment is a serious complication of CMV retinitis. In one study, 24% of patients with CMV retinitis for one year developed a retinal detachment.[16] Active retinitis and larger lesions are associated with a higher risk for detachment. The patient notices an abrupt shadow and loss of sight. With extensive areas of atrophic retina, a standard scleral buckling operation is usually not successful. Surgical treatment with the techniques of vitrectomy and silicone oil injection are needed to help reposition the retina and preserve sight.

Other important causes of retinitis

Toxoplasmosis causes a focal necrotizing retinitis in immunocompetent individuals and can also present in the patient with HIV infection. Clinically, toxoplasmosis has more inflammation in the vitreous and less hemorrhage than CMV retinitis. In the immunocompromised patient, the infection may be more fulminant making differentiation from CMV more difficult. The distinction is important because of the different treatment options which include pyrimethamine, sulfadiazine, clindamycin, folinic acid, and prednisone.

Acute retinal necrosis is a severe, rapidly spreading, necrotizing retinitis with vitritis, occlusive vasculitis, and optic neuritis caused by herpes zoster or simplex developing in an otherwise healthy individual. In the patient with AIDS, it may present with no vascular occlusion and minimal intraocular inflammation. This has been given the name progressive outer retinal necrosis (PORN).[17] The rapid progression helps distinguish this infection from CMV retinitis. Prompt treatment with intravenous acyclovir is recommended,

but sight can still be abruptly and permanently lost. There is a high rate of retinal detachment.

Screening

Studies have shown that the risk of CMV is inversely related to the CD4+ T-cell counts. Some experts have used those counts to establish the frequency ophthalmologic examinations as follows: yearly for CD4+ T-cell counts greater than 0.10 x 10^9/L, every 6 months for CD4+ T-cell counts between 0.1 and 0.05 x 10^9/L, and every 4 months for CD4+ T-cell counts less than 0.05 x 10^9/L.[18]

Summary

Ocular manifestations of AIDS are not uncommon in Hawaii. Most of the conditions mentioned above have been seen in Honolulu. The goal of the ophthalmologist is to maintain useful sight in an illness which has a high mortality. With early diagnosis of ocular diseases, this has been the case. Improved systemic treatment including new combinations of anti-HIV medications have prolonged the lives of many patients with AIDS. The challenge to preserve sight and decrease the ocular morbidity of AIDS continues to evolve with novel presentations of known diseases, new conditions, and advances in treatment modalities.



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Retinal Venous Occlusive Disease

Vernon K.W. Wong MD*

Occlusions of the retinal venous system are the second most common retinal vascular disease after diabetic retinopathy. Patients present with sudden vision loss or may be asymptomatic. Retinal vein occlusions are classified into branch or central occlusions. Laser photocoagulation and vitreoretinal surgical techniques are used to treat the complications of macular edema, neovascularization, vitreous hemorrhage and retinal detachment.

Retinal Venous Occlusive Disease

Occlusions of the retinal venous system are the second most common retinal vascular disease after diabetic retinopathy.[1,2] Retinal venous occlusions are classified into branch retinal vein occlusions (BRVO) and central retinal vein occlusions (CRVO).

Branch Retinal Vein Occlusion (BRVO)

Clinical Presentation

Branch retinal vein occlusions usually occur in people in their 60s, affecting men and women equally.[3] Patients may notice an acute, painless loss of vision if there is macular edema, ischemic maculopathy, or intraretinal hemorrhage involving the fovea. A BRVO occurring in a nasal retinal quadrant can be asymptomatic. A longstanding BRVO may present with floaters or an abrupt decrease in vision from vitreous hemorrhage or retinal detachment.

In a recent BRVO, ophthalmoscopy can reveal intraretinal hemorrhages in a segmental pattern, cotton-wool spots, and macular edema. In a chronic BRVO, collateral vessels, macular retinal pigment epithelium changes, and neovascularization of the retina or disc may develop. (Fig 1)

Branch retinal vein occlusions occur most commonly in the superotemporal retinal quadrant, and about 10% of patients with BRVO will develop retinal vein occlusion in the fellow eye.[4,5] Systemic hypertension is a risk factor for a BRVO.[3-5]

*Correspondence to author:
Vernon K.W. Wong MD
1481 S. King Street
Suite 423
Honolulu, Hawaii 96814

Classification

Branch retinal vein occlusions are categorized into ischemic and nonischemic types. A nonischemic BRVO is defined as less than 5 disc diameters of retinal capillary nonperfusion as documented by fluorescein angiography, while an ischemic BRVO is defined as greater than 5 disc diameters.[3,4]

Complications

About 50% of patients with BRVOs have a final visual acuity of 20/40 or greater.[4,5] Patients with nonischemic BRVOs may lose vision secondary to macular edema. Patients with ischemic BRVOs can lose vision from macular edema, ischemic maculopathy, vitreous hemorrhage, or retinal detachment. If ischemia occurs in the macula, the patient may notice central vision loss, while ophthalmoscopy may not reveal macular edema. A fluorescein angiogram will demonstrate an enlarged and irregular foveal avascular zone. (Fig 2)

Approximately 30-40% of patients with ischemic BRVOs develop neovascularization of the retina or disc.[2,3,6] In approximately 60% of the patients who develop neovascularization, traction from the vitreous causes these new vessels to bleed leading to vitreous hemorrhage.[2,6] Rarely, traction on the new vessels may lead to a traction retinal detachment or a retinal tear that progresses to a rhegmatogenous retinal detachment.[2-6]

Treatment

Patients with a nonischemic BRVO without macular edema are followed clinically for the development of macular edema and for progression into an ischemic BRVO and its complications. The Branch Vein Occlusion Study was a multicenter, randomized, controlled clinical trial designed to answer if argon laser photocoagulation could improve visual acuity in eyes with BRVO and macular edema reducing vision to 20/40 or worse.[7] The study found that 65% of eyes treated with argon laser photocoagulation compared to 37% of control gained 2 or more lines of vision, a difference that was statistically significant. The study investigators recommend argon laser photocoagulation for patients with BRVOs at least 3 months old and vision loss 20/40 or worse from macular edema.[7]

The Branch Vein Occlusion Study was also designed to see if peripheral scatter argon laser photocoagulation could prevent retinal neovascularization and vitreous hemorrhage.[6] It was found that neovascularization and vitreous hemorrhage in eyes with preexisting neovascularization were significantly less in treated eyes. Data from the study suggested that there was minimal risk for severe vision loss even if laser was performed after the development of neovascularization. The study recommended scatter argon laser

Fig. 1.—Left eye. Fundus photograph of an ischemic, superotemporal BRVO demonstrates elevated neovascularization of the disc and retina, and preretinal hemorrhage inferior to the disc.



Fig. 2.—Left eye. Venous phase fluorescein angiogram of an ischemic superotemporal BRVO reveals leakage from the disc and retinal neovascularization. The foveal avascular zone is enlarged and irregular. The superotemporal macula is hypofluorescent secondary to capillary nonperfusion.



Fig. 3.—Left eye. Fundus photograph of a nonischemic CRVO demonstrates intraretinal hemorrhages in all 4 quadrants and dilated retinal veins.



Fig. 4.—Left eye. Recirculation phase fluorescein angiogram of a nonischemic CRVO shows hyperfluorescent staining of the disc and retinal veins.



photocoagulation to areas of retinal ischemia for patients with a BRVO and neovascularization.[6]

In ischemic BRVOs with nonclearing vitreous hemorrhage or retinal detachment, vitreoretinal surgical techniques can remove the hemorrhage and reattach the retina.

Central Retinal Vein Occlusion (CRVO)

Clinical Presentation

The typical patient with a CRVO is in the 60s.[3] Patients describe sudden, painless loss of vision and occasionally, of a painful, red eye from neovascular glaucoma secondary to an ischemic CRVO.

In an acute CRVO, ophthalmoscopy reveals intraretinal hemorrhages in all 4 quadrants and dilated, tortuous retinal veins. (Fig 3) The disc may be swollen, and there may be cotton-wool spots and cystoid macular edema. Patients with an ischemic CRVO develop anterior segment or posterior segment neovascularization which manifests as new vessels on the iris, angle, disc, or retina. In longstanding CRVOs patients can develop cystoid macular edema, macular retinal pigment epithelium changes, and retinal venous collaterals.

Risk factors for CRVO include cardiovascular disease, hypertension, diabetes mellitus, hyperviscosity syndromes, and increased intraocular pressure.[1, 3, 4]

Classification

Central retinal vein occlusions are categorized into ischemic and nonischemic types. A nonischemic CRVO is defined as less than 10 disc areas of capillary nonperfusion on fluorescein angiography while an ischemic CRVO is defined as greater than 10 disc areas of capillary nonperfusion.[8,9] (Fig. 4) Clinically, patients with an ischemic CRVO have poor vision, an afferent pupillary defect, and extensive intraretinal hemorrhages.[3, 4, 8, 9]

Complications

Patients with a nonischemic CRVO may lose vision secondary to macular edema. Patients with an ischemic CRVO can lose vision from macular edema, ischemic maculopathy, neovascular glaucoma, and vitreous hemorrhage. If ischemia occurs in the macula, a patient may notice central vision loss, while ophthalmoscopy may not reveal macular edema. A fluorescein angiogram will demonstrate an enlarged, irregular foveal avascular zone.

A severe complication of an ischemic CRVO is anterior segment neovascularization which occurs in about 35% of patients.[8,9] Untreated anterior segment neovascularization can progress to neovascular glaucoma and blindness. About 18% of patients with ischemic CRVOs develop neovascularization of the retina or disc.[10] Traction from the vitreous may cause these new vessels to bleed leading to vitreous hemorrhage and decreased vision.

Treatment

Patients with a nonischemic CRVO are followed clinically for progression into an ischemic CRVO and its complications. About 15% of patients with a nonischemic CRVO progress to an ischemic CRVO within 4 months.[8,9] The Central Vein Occlusion Study was a multicenter, randomized, controlled clinical trial to see if argon laser photocoagulation could improve visual acuity in eyes with a CRVO with macular edema and vision 20/50 or worse.[11] The study found no visual acuity difference in treated and untreated eyes. Macular grid photocoagulation is not recommended for patients that meet the study entry criteria.[11]

The Central Vein Occlusion Study was also designed to see whether panretinal argon laser photocoagulation could prevent anterior segment neovascularization and neovascular glaucoma.[10] Patients with ischemic CRVOs (defined as greater than 10 disc areas of capillary nonperfusion as documented by fluorescein angiography) were treated with panretinal argon laser photocoagulation before and after development of anterior segment neovascularization. The study proved that prophylactic laser decreased the incidence of anterior segment neovascularization, but laser at the time of development of anterior segment neovascularization prevented neovascular glaucoma. The study investigators recommend careful follow-up of patients with an ischemic CRVO and panretinal photocoagulation when the patient develops two clock hours of iris neovascularization or any angle neovascularization.[10, 12]

Summary

Retinal vein occlusions are a common cause of vision loss in people over age 60. Careful, serial ophthalmoscopy aids in the initial diagnosis and recognition of subsequent complications. Laser photocoagulation is used to treat macular edema and retinal neovascularization secondary to a BRVO. Laser photocoagulation is also used to prevent neovascular glaucoma in an ischemic CRVO. Occasionally, vitreoretinal surgical techniques are needed to remove chronic vitreous hemorrhage or repair a retinal detachment secondary to a retinal vein occlusion.

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What does it take to bring the America's Cup to Hawaii? Join the Aloha Racing team and find out. Aloha Racing corporate sponsor HEALTHSOUTH Corp., the nations largest rehabilitation provider and undisputed leader in sports medicine, has joined our Hawaii America's Cup Team. As members of the Hawaii healthcare industry, you too can benefit during the next three years from an association with one of the most exciting — and physically demanding sports in the world ... the America's Cup.

If you'd like to find out how you can race with the team aboard the Aloha Racing yacht during the next America's Cup in Aukland, New Zealand; how your healthcare business can capitalize on the international marketing opportunities of this 'healthy challenge' or how you can personally support the effort to bring the America's Cup to Hawaii, contact D. J. Cathcart with Aloha Racing at **(808) 366-0259**.

ALOHA Racing

WAIKIKI YACHT CLUB
AMERICA'S CUP CHALLENGE

Ocular Trauma

Joyce H. Cassen MD, PhD
Assistant Clinical Professor, John A. Burns School of Medicine

Summary: *A review of the literature was conducted to investigate recent articles about ocular trauma. Eye injuries may be divided into blunt and penetrating types. Males are more affected than females. Evaluation of eye injuries should start with visual acuity and continue with prompt referral to an ophthalmologist as indicated.*
Design: *Medlines search/American Academy of Ophthalmology*
Results: *Ocular trauma is a frequent reason for emergency room visits. Most injuries stem from sports, recreation, military, occupational, or automotive.*
Discussion: *Patient education is highly recommended, as well as prevention by use of protective polycarbonate eyewear.*

Introduction

Eye injuries from blunt trauma, penetrating forces, burns, or irritating compounds may cause ophthalmic morbidity.[1] Ocular trauma is a frequent reason for emergency room visits.[2] Common eye injuries occur from sports, recreation, military, occupational fields such as carpentry and construction, or automotive, to name several major areas. Injuries may occur to the orbit and ocular adnexa, cornea, sclera, uveal tract, retina, and optic nerve. An international standardized classification[3] of ocular trauma has been developed and endorsed by several institutions, including the International Society of Ocular Trauma, the U.S. Eye Injury Registry, the American Academy of Ophthalmology, and the Retina Society. Males have more ocular injuries than females. In Hawaii, especially, surfing injuries to the eye and ocular adnexa are common in young males and may be devastating. Evaluation should be prompt.[4] Measurement of the visual acuity of the eye is the best way to start, to determine initial severity of the damage, followed by complete eye exam. A report may be filed to the U.S. Eye Injury Registry for tabulation of ocular injuries nationwide.

Table 1.—Clinical Diagnosis at Presentation

Initial Diagnosis	No.	%
Lids and orbit	45	53.6
Lids/and orbital contusion	39	46.4
Lid laceration	7	8.3
Orbital fracture	2	2.4
Conjunctiva	16	19.0
Subconjuctival hemorrhage	14	16.6
Conjunctival laceration	2	2.4
Cornea	16	19.0
Corneal abrasion	16	19.0
Corneal laceration	1	1.2
Corneoscleral laceration	1	1.2
Anterior chamber	58	69.0
Uveitis	32	38.0
Hyphema	45	53.6
Glaucoma, secondary	24	28.6
Iris laceration or dialysis	3	3.6
Extraocular muscle	2	2.4
Third nerve paresis	1	1.2
Fourth nerve paresis	1	1.2
Vitreous and retina	37	44.0
Vitreous hemorrhage	18	21.4
Retinal hemorrhage	24	28.6
Retinal edema	12	14.3
Macular edema	5	6.0
Macular hemorrhage	3	3.6
Retinal dialysis	2	2.4
Retinal detachment (rhegmatogenous)	3	3.6
Choroidal hemorrhage	2	2.4

Blunt trauma

Sports

In a report by Filipe et al[5], it was noted that most sports ocular injuries occurred predominantly in young males, with mean age of 25 years old. These were primarily blunt injuries from soccer, baseball, squash, and racquet balls. Hyphema, vitreous hemorrhage, *commotio retinae*, and retinal detachment occurred. Angle recession glaucoma was significantly higher in cases of hyphema. Retinal tears were more common in the presence of vitreous hemorrhage. The U.S. Eye Injury Registry report forms were useful for collecting data on injuries. Clinical diagnosis at presentation of injuries was based on 84 consecutive cases (See Table 1). With eye protection, 90% of sports eye injuries are preventable.

In Hawaii, aside from ball injuries, surfing accounts for a multitude of recreational trauma, especially from the fin of the surfboard. Eyelid lacerations (See Figs. 1 and 2), scleral laceration, hyphema, traumatic cataract, lens dislocation, glaucoma, retinal pathology, optic nerve severing, and extraocular muscle shearing have been reported locally. Many of these cases require several ophthalmologic subspecialists to surgically rehabilitate the injured eye.

Automotive

Auto accidents represent high-velocity blunt trauma. Recently, air-bags have gained acceptance in vehicular safety. A review of air bag-related ocular trauma was carried out by Ghafouri et al.[6] A total of 11 accidents with 32 patients and 39 eyes were reviewed. The most common type of eye injury was to the eyelids (28 eyes), conjunctiva (25 eyes), and the cornea (28 eyes). Hyphema was seen in 11 eyes. Serious cases of vision-threatening injury included retinal dialysis, detachment, dislocated lens with cataract, and scleral rupture. Patients were 55% women, and 45% men. Age ranged from 2 - 81 (mean age 36). Damage to the right eye occupied in 35% of cases while 38% to the left eye and 27% bilateral. These findings indicate that further refinement in air-bag design is needed.

Fig. 1.—Eye lid Laceration from Surfboard



Fig. 2.—3 Months Post-Repair



Table 2.—Associated Ocular Injuries

	Anterior	Epibulbar	Posterior
Total	13	4	10
Conjunctiva/cornea			
Subconjunctival hemorrhage, corneal abrasion, injection, chemosis	6	4	8
Anterior chamber			
Hyphema	1	1	2
Iritis	2	1	1
Posterior segment			
Commotio	3	1	4
Retinal/vitreous hemorrhage	4	2	3
RD/retinal tear/ sclopetaria/ choroidal rupture	2	1	4
Decreased motility	1	2	7
Open globe	0	0	2
Afferent pupillary defect			
Traumatic optic neuropathy	1	1	7
Fracture	3	1	4

RD = retinal detachment.

Penetrating Trauma

Foreign bodies

Projectile metallic foreign bodies in the orbit such as BB's, bullets, shot, and miscellaneous fragments have all been reported in the orbit and eye. Finkelstein et al[7] reviewed 27 orbital cases in 7 years preceding, and found the majority of patients male, between age 11-30, and had BB pellets in the orbit. Thirteen of 27 cases were anterior, 4 equatorial, and 10 posterior. Not all BB's were felt necessary to remove if they were in a remote area of the orbit. Final visual acuity was improved on discharge.

Greater ocular morbidity is associated with intraocular foreign bodies. Pathology may include corneal abrasion, laceration of the globe, traumatic cataract, retinal detachment, and the like (See Table 2). Tomic[8] reviewed 40 cases of intraocular foreign bodies which were evaluated and surgically treated. The group was mainly males with average age of 33 years. In these cases 92% of the foreign bodies were metallic. After a one month follow-up, 70% of eyes achieved good post-op vision. Metallic foreign bodies may be removed with a sterile surgical magnet in some cases, where the intraocular foreign body is anterior to the retina. In cases where the penetrating trauma has left an eye with no light perception, it may be necessary to remove the traumatized eye to avoid sympathetic ophthalmia. In these cases, a second ophthalmic opinion is required in most hospital settings.

Education and protective eye wear (safety goggles) are useful in reducing projectile ocular injuries.

Fireworks

In a firecracker study[9], 316 children were treated for injuries. Of these cases 95% were injured between June 22 - July 14 over a 22 year period. The average age was 8.5 years, with a range of 1 month to 17 years old. Eyes were injured in 29% of cases: 15% of children required surgery and 10% had permanent sequelae. The authors felt that public fireworks performed professionally were reasonable, however that private fireworks should be banned.

Dog bites

Dog bites account for canalicular injuries in conjunction with facial lacerations. In 17 dog bite-induced canalicular injuries,[10] all were treated with antibiotics and surgical repair. Prophylaxis of canine oral flora needs to be considered in these cases.

Military

Battlefield injuries of the eye and orbit can cause severe ocular morbidity and incapacitate military personnel.[11] Most penetrating eye injuries may be from shrapnel, bullets, or debris. Any trauma on the battlefield requires prompt diagnosis, coupled with indicated treatment and evacuation from the war zone. Often care is administered in a mobile unit initially.

Continued on Next Page

Irritating compounds/Burns

Super glue

Ocular injury from super glue may present to the office or emergency room. In a study[12] of 14 patients over a one month period, there were no long term complications from the super glue injury. Eyelid closure and conjunctival and corneal abrasions may occur. Treatment includes removal of super glue by cutting it off from eyelashes, to allow the patient to open the eye. The glue may be allowed to slough off on its own if there is no diminution of sight. Local treatment for corneal abrasion may be indicated, including usage of topical antibiotics.

Chemicals

Cleaning compounds and other toxic fluids may contain acids or bases. These should be copiously rinsed from the eye, and topical antibiotics applied. Follow-up with an ophthalmologist is recommended.

Burns

Ocular burns may be from toxic chemicals or from prolonged sun/UV exposure. Topical therapy is generally adequate, with conjunctival and corneal epithelium restoring itself within several days. Pain control may be required, according to the severity of the burn.

Conclusion

Traumatic eye injuries require careful evaluation. Initial evaluation should be to check the visual acuity and patch the eye for protection until consultation. Superficial injuries may be treated by a generalist or emergency room. However, any severe ocular injury should be promptly referred to an ophthalmologist. The American Academy of Ophthalmology recommends protective polycarbonate eye wear for prevention of eye injuries.

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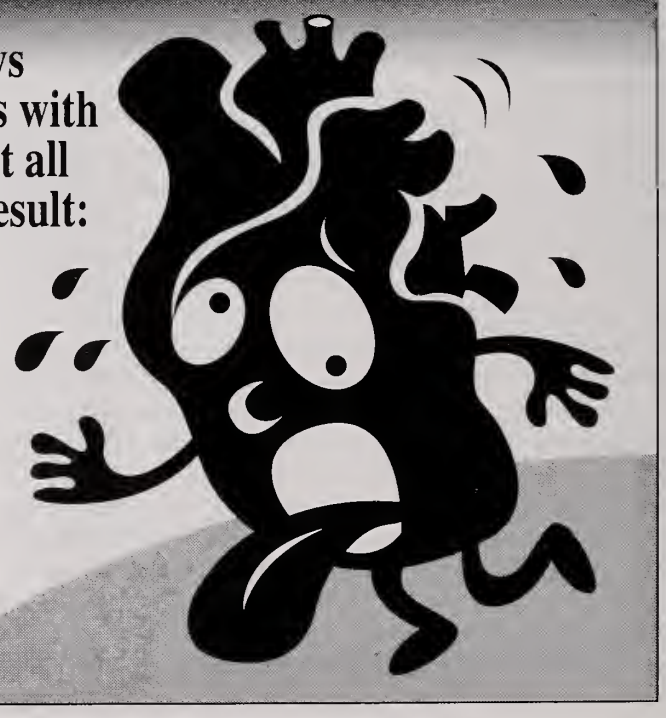
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Congestive Heart Failure

American Heart Association℠
Fighting Heart Disease and Stroke

The American Heart Association says congestive heart failure (CHF) starts with the inability of the heart to pump out all of the blood that returns to it. The result:

- CHF is the most frequent cause of hospitalization for people 65 and older
- 50% of CHF patients die within 5 years of diagnosis
- From 1979 to 1993, CHF deaths increased almost 110 percent



©1997, American Heart Association

Council Highlights

Friday, September 5, 1997
Roger Kimura MD, Secretary

The meeting was called to order by Dr Spangler, President at 5:35 p.m.

those present were Drs L. Howard, President-elect; C. Lehman; Immediate Past President; C. Kelley, Treasurer; R. Kimura, Secretary; AMA Delegate, C. Kam; Alternate AMA Delegate: S. Wallach; Speaker: H.K.W. Chinn, County Presidents: G. McKenna - Kauai, Ali Bairos - West Hawaii, W. Dang Jr. - Honolulu; Councilors: T. Au, P. Chinn, C. Goto, H. Chingon, M. Shirasu, R. Stevens, W. Young, P. Kim, C. Kadooka, B. Leeloy; Past Presidents: W. Chang, W. Dang, G. Goto, J. Lumeng, J. McDonnell; Medical Student Delegate: W. Hara; Alliance: C. Gutteling, President and other members (Lois Cecil, Guen Fu, Karen Zelko)

HMA Staff: J. Won, N. Jones, P. Kawamoto, J. Asato, A. Rogness - recording secretary

Introduction: Dr Spangler introduced and welcomed Dr Harry Chingon a child psychiatrist who replaced Dr Kim Thorburn as Honolulu Councilor.

Minutes: The minutes of the August 1 meeting were approved as circulated.

- Dr Spangler reminded Council of the upcoming Legislative Committee meeting on Sept. 10 at noon and that the HMA Membership Committee will be meeting later in the month.
- Dr Lehman expressed words of appreciation to Dr Spangler as it was his last Council meeting presiding as President of the HMA. A lei was presented and a round of applause was given.
- The HMA Alliance presented a written report of their efforts on behalf of physicians. The written agreement drafted by the Ad hoc Committee between the Alliance and the HMA was distributed at the meeting. It was passed that the ad hoc committee meet with the Alliance to review the agreement and come to a mutual agreement and it be presented at the HMA Annual Meeting.

For Action

- A motion was passed that there be no membership dues increase for 1998 and the dues remain at the 1997 rate.
- Council approved the Finance Committee's recommendation to approve the 1998 budget for presentation to the House of Delegates with the amendment to dues and a reduction in travel funds for the medical student and resident physician sections.
- Council approved the Finance Committee's recommendation to approve the Financial Policy Manual as amended to include Hawaii Tumor Registry as an affiliated organization.
- Council approved the Long Range Planning Committee's recommendations: 1) An ad hoc Leadership Training Committee be formed which will be mandated to plan a leadership training course for the purpose of: a) Educating interested HMA members about their leadership roles in the HMA; b) to help our members develop general leadership skills and proficiencies in conducting organizational functions; 2) The Committee develop one leadership course to correspond near the time of the AMA Interim Meeting in December 1998 in order to benefit from AMA Leadership Training personnel. (Drs. Patricia Chinn, Stephen Wallach and Carl Lehman volunteered to be on the ad hoc Leadership Training Committee).
- Council passed a motion that HMA decline any future invitations to attend tort reform coalition meetings that include the tobacco industry.
- Council also passed a motion that HMA support any legislation that would abolish joint and several liability.

Component Society Reports

Honolulu.—Dr W. Dang, Jr. reported that the Board of Governors will be meeting on September 16/97 and that a joint HCMS Caucus and Board of Governors will be held on October 14 to review the HMA annual reports and resolutions to be presented to the House of Delegates. The HCMS Annual Meeting will be held on November 23 and nominations for officers will come out over the next month.

West Hawaii.—Dr A. Bairos, President reported that Dr Steve Denzer gave an interesting talk on AIDS at their County meeting. Three members attended from North Hawaii.

Kauai, Maui and Hawaii.—No report.

For Information

Legislative and Government Affairs: The HMA has hired a new staff person Heidi Singh to fill the position of Director of Legislative and Government Affairs. Mrs. Singh has a Master's in Public Health, has worked 5 years for two congressmen, and has also worked in the managed care Blue Cross/Blue Shield Plan. She will write testimony and lobby for the HMA as well as maintain responsibility for those committees dealing with government agencies.

Medicare Fraud and Abuse Presentation: Mr Won reported that the presentation will be held at the St. Francis L.Q. Pang Auditorium September 26 from 5:30 - 7 p.m. Panelists will be Paul Canniarato, Fraud Team Leader of Transamerica/Occidental Life; Larry Tong, Esq., Assistant U.S. Attorney - U.S. Dept. of Justice; Bernard Fong, MD - Carrier Medical Director; and Herbert K.W. Chinn, MD, Co-Chair - Carrier Advisory Committee.

Meeting was adjourned at 7:30 p.m.

News and Notes Henry N. Yokoyama MD

Life in These Parts

A Leeward physician's "Worst page ever." The wife of a patient called at 3 am to report that her husband had dropped his blood pressure pill and their pet dog had swallowed it.

"Just have him take another pill," he mumbled sleepily. The wife, really wanted to know what to do about her dog.

"Call the vet," he remembered telling her.

(As told by Merck rep Kyllie Armstrong)

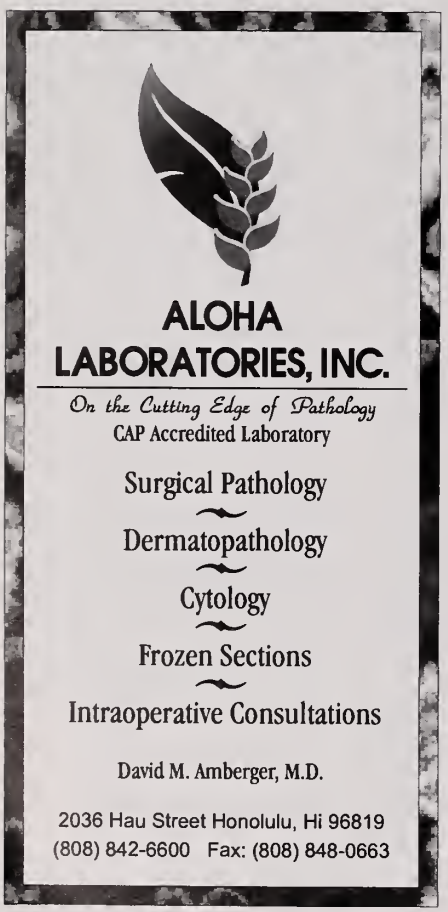
Internet Jokes

(As told by our favorite humorist Ronald Lee)

The president was jogging on the beach with his FBI retinue when he spied an ancient bottle. Sure enough, when he rubbed the bottle, a genie popped out.

"You can have one wish," the genie said. The president excitedly pulled out a map of the Middle East and said, "I wish for peace over this land." The genie demurred, "That's too much for one wish." The president reached for his wallet and pulled out a photo of Hillary.

"Can you make her more popular and attractive?" The genie studied the photo carefully and said, "Naw, Let me see that map again."



"I hope the toes I step on today are not connected to an ass I have to kiss tomorrow."

Intelligence is like underwear. We all should have it, but we shouldn't show it off.

Elected, Appointed & Honored

Cardiologist ***Coolidge Waki*** was inducted as a Fellow and named a trustee for a 5 year term at the 46th Annual American College of Cardiology Scientific Session.

Thomas Vogt MD, MPH, researcher, teacher and administrator was picked from 20 candidates in an international search, to be the Cancer Research Center of Hawaii's director of Prevention and Control. Tom will be the center's first holder of its M.J. Sullivan Chair in Cancer Prevention & Control Research. He was formerly director of epidemiology and disease prevention program at Kaiser's Health Research in Portland and principal director of the National Cancer Institute's Tobacco Reduction and Cancer Control Program.

Ophthalmologist ***Jorge G. Camara***, Aloha Medical Mission director, department chairman at St. Francis Hospital and UH clinical assistant professor was recently appointed a director of American Savings Bank.

The District 50 Hawaii Lions club named ophthalmologist ***John Corboy*** Humanitarian of 1997 at its 61st annual convention in June.

Physician Moves

Kathleen L. Mah, board certified general surgeon opened her practice at Kapiolani Medical Center, POB Suite 920 and Queen's POB Suite 703.

Ob-Gyn man ***Francis H. Soon*** retired in July after 35 years of practice.

Alan Taniguchi cited "personal reasons" for leaving his job as medical director for the State prison system. Alan inherited the position from Kim Thorburn who resigned last year.

Plastic surgeon, ***Eugene Smith*** opened at three locations: St. Francis Medical office building, Suite 301; St. Francis Medical Plaza-West, Suite 100; and Plastic Surgery Center of the Pacific, Bank of Hawaii building, Suite 1011.

FP ***Randall Nitta*** joined the Mililani Family Clinic.

Pediatric and fetal cardiologist ***Lance Shirai*** opened his practice at Kapiolani Medical Center, POB Suite 1020.

OB/GYN ***Linda Waki Ho*** has relocated to her new office at, Artesian Plaza, 1907 S. Beretania St, 5th Floor.

Quotable Quotes

One of the secrets of a happy life is continuous small treats.

Honesty is something you can't wear out.

If you're treading water, you are losing ground.

All our souls are written in our eyes.

No pessimist ever discovered the secrets of the stars or sailed to an uncharted land, or opened a new heaven to the human spirit.

What a strange world this could be if we all had the same sense of humor.

How True

One of the hardest things to imagine is that you are not smarter than average.

If mom's on a diet, everyone is on a diet.

The person who says "I won't say another word," always does.

You celebrate the victory, but you analyze the defeat.

Regret for the things we did can be tempered with time; it is regret for things we did not do that is inconsolable.

Truth Hurts

The witness on the stand was losing patience with the questioning attorney's condescending manner.

"Well sir," the lawyer went on, "from your last answer, I can tell that you are a man of intelligence and good judgement."

"Thank you Counselor," said the witness, "If I weren't under oath, I'd return the compliment."

Conference Notes

Clinical Frontiers in Cardiology

Honolulu Country Club, Sunday, September 7, Supported by Pfizer Inc. educational grant.

Treating the Patient with Multiple Risk Factors for Coronary Heart Disease

John Speer Schroeder MD, Professor of Cardiovascular Medicine, Stanford School of Medicine

"The medical profession is too concerned with the blood pressure cuff. Hypertension is a single gene. A triad of hyperlipidemia, hypertension, and insulinemia."

Quality of Life Issues in CAD Therapy

- Gustation
- Defecation
- Cerebration
- Ambulation
- Fornication

• Diuretics and Beta Blockers: Poor quality of life.

• ACE: Good lipid control and quality of life; effective in hypertension and CHF; but 20% develop cough. Substitute ACE with Angiotensin II Blocker

• Calcium Channel Blockers: Well tolerated and reverses problems; peripheral vasodilator; promotes renal socium excretion; EDRF normal; no adverse effects on quality of life; also antiatherosclerotic effect; CaCB lowers lipids in transplantation, eg. diltiazem. Effective in elderly and in African-Americans.

re Jan *JAMA* article on increased incidence of MI's with Ca Channel Blockers: <u>False</u>

• Study retrospective

• HMO's use beta blockers and diuretics first, then use CaCB

- Study based on short acting CaCB's.

Systolic Hypertension: SHEP Trial

- Treat isolated systolic HTN (with diastolic pressure less than 90). Keep systolic pressure below 140.

Two challenges for physicians:

- Asymptomatic HTN
- Compliance

Unstable Angina

Treat lipids aggressively.

- Simvastatin Trial
 - 30% reduction of overall mortality. Aggressive lipid therapy. EDRF stabilizes plaques and reduces angina. 50% reduction in stroke risk.
- Pravastatin Trial
 - LDL below 100. 24% reduction in fatal and non-fatal MI's. 27% less revasculization procedures.
- West of Scotland Coronary Prevention Trial
 - LDL below 100. One third less CABG. One third less repeat CABG. EDRF normalizes.

Lipid Lowering Trials

Aggressive LDL lowering restores the endothelial factor. LDL lowering is the primary objective. The lower the LDL, the better the results.

"At Stanford, everybody gets started on Day 2 post CABG with a statin"

The goals are:

Total cholesterol less than 150; LDL between 50 - 80 or at least below 100. Every diabetic is treated (otherwise 43% mortality in 5 years). No more lopid, niacin, etc. Statins are the first line of therapy in 99% of our patients.

re Antioxidants: Vit E 400 I.U. and Vit C 500 mg.

re Diet: Low saturated fats, Saturated fats raise LDL; eat less than 20 to 25 gms saturated fats.

Results: "50% reduction in mortality and morbidity in CAD/HTN patients with statins, anti-oxidants and low saturated fats."

Summary

- Stop smoking
- Treat hypertension with calcium channel blockers/ACE
- Treat angina with CaCB
- Treat lipids with low saturated fats and statins
- Take anti-oxidants, Vit C and Vit E
- ERT for post-menopausal women

re Homocysteinemia: Take 400 mg Folic acid daily

re Liver enzyme monitoring for Statins: Unnecessary after the first year.

California wine raises HDL.

Classified Notices

To place a classified notice:

HMA members.—Please send a signed and typewritten ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in HMJ as space is available.

Nonmembers.—Please call 536-7702 for a nonmember form. Rates are $1.50 a word with a minimum of 20 words or $30. Not commissionable. Payment must accompany written order.

Office Space

Liliha Medical Bldg.—Share a 1,397 sq. ft. medical office with free visitor parking. Call Chaney, Brooks & Company. 544-9557.

Private Practice.—in Waimea, Big Island seeking Internist to share space and coverage. Call (808) 885-9318 for information.

A Doctor to share first floor suite.—in the Medical Arts Bldg. Prefer MD in Internal Medicine/ENT or Family Practice who participates in most medical insurances including Medicaid and Quest. Option to purchase practice in very near future. Call 593-9558.

Locum Tenens

Locum Tenens available.—Board-certified family practice, 14 yrs clinical experience in Hawaii. Office coverage, Deborah C. Love MD; home Oahu: (808) 637-8611; cell ph: (808) 295-2770.

Business Opportunity

Veteran Certified Petroleum Geologist.—Wishes to team up with oil and gas investment capital finder. Excellent remuneration. (614) 453-9231 or fax (614) 450-7507.

For Sale

Misc for Sale.—Canon copier model 4050 $1,950; desk 60" x 30" $50.; Credenza 71" x 18" $100, Xerox Model 5309, 1 yr old , $525. Ask for Nelson 536-7702.

Announcement

Internist/Pulmonologist.—Opportunity to join established group practice in Waimea, on the Big Island. Contact: Dr John Dawson or Dr Sharon Vitousek. (808) 885-7351. Waimea Medical Association, 67-1123 Mamalahoa Hwy., #128, Kamuela, HI 96743.

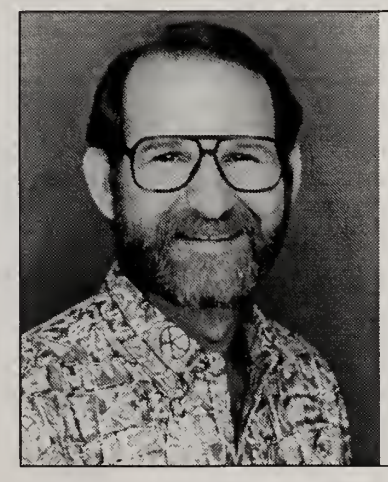
Oculoplastics Practice Opened.—Timothy F. McDevitt MD has opened the Oculoplastics Center in Queen's POB I, Suite 708. His practice is limited to ophthalmic plastic and reconstructive surgery of the eyelids, lacrimal system and orbit, and cosmetic eyelid surgery. 599-4755.

Misc.

American Heart Association Golf Tournament.—Thursday, November 13 at the Kaneohe Klipper Course, Kaneohe Marine Base. Sponsored by Central Pacific Bank. Will feature on-course refreshments, an awards reception and buffet following the event, and many prizes. Hole-in-One prizes include $10,000 cash and a brand new Ford. Funds raised will help support heart research and education programs in Hawaii. For more information, contact Liz DeLima 538-7021.

Navigating Diabetes Care into the Next Millennium.—8 to 4:30 pm, Hawaiian Regent Hotel at Waikiki Beach; jointly sponsored by the American Diabetes Association, Hawaii Affiliate and the Hawaii Consortium for Continuing Medical Education. Call Marie Robello 547-4823 for more information.

Cars for Catholic Charities.—Give hope to a needy child or family by donating your car to Catholic Charities. Your donation is tax deductible at the fair market value. Call (808) 537-6321, Ext. 303 for more information.



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Experience varies directly with equipment ruined.

A healthy 39-year-old woman went to her chiropractor complaining of neck and shoulder pain related to her work as an airline flight attendant. She was treated with adjustment of her cervical spine. Immediately after the manipulation, she lost most of her left peripheral visual field. She noted dizziness and lay back down, and the chiropractor performed additional adjustment. The dizziness resolved, but the visual defect remained. She was referred for immediate neurologic evaluation, and magnetic resonance imaging showed an acute infarction of the ventromedial aspect of the inferior right occipital lobe. No bleeding nor mass lesions were seen, the cervical spine was normal, and no other focal neurologic deficits were found. Follow-up visits at three and six months after the initial ophthalmic consultation, noted no change in her homonymous hemianopsia. The theoretical explanation is that stretching the vertebrobasilar artery leads to an embolic stroke. This complication of chiropractic treatment is extremely rare, but has been previously reported. So, if you get out of line, don't let them rub you the wrong way.

Be careful if you don't know where you are going. You might not get there.

And on that subject closer to home, North Hawaii Community Hospital on the big island has granted medical staff credentials to some alternative practitioners, such as those using "healing touch." HMA past president, Fred Holschuh, MD, Hilo ER physician and alternate delegate to the American Medical Association House of Delegates, addressed the AMA House by saying, "It might sound strange to some people in this room , but this is the way the community wants it done. A lot of people are going to these folks, and we want to make sure that we have some kind of medical control and supervision when we are dealing with them." In ophthalmology we are familiar with the choice of alternative therapies by "pretenders," but they constantly reject medical supervision, often with the general public at risk.

Circle the wagons. Aim out.

Congress passed a bill with reductions in Medicare reimbursement, centered around a single RVS conversion factor in 1998. Surgeons, especially ophthalmologists already shredded by reimbursement reductions, shouted to our Congressmen that it is unfair to leap to the new schedule without the supporting data, and the fact that surgeons have already performed beyond expectations in conforming to previous HCFA mandates. Still the pressure was to simply plug in the inclusive factor beginning in 1998, and forget gathering data. Sadly, much of the problem generates from non-surgeons who apparently believe that reducing to a single conversion factor will provide them with increased income. Wake up, my beloved colleagues! We are in the same canoe here, and drilling a hole in the opposite end only serves to aid those who want to make the practice of medicine a public utility. Experience demonstrates that every inch of ground lost in the struggle against the scheming forces in the beltway, cannot be regained.

Facts often weaken under extreme heat and pressure.

The House of Representatives version of Medicare reform legislation included a $250,000 cap on non-economic damages in medical malpractice lawsuits. The Congressional Budget Office estimates a conservative figure of $200 million in savings over a seven year period, but the Physician Insurers Association of America (PIAA) claims that savings would be considerably greater. A similar action in the California liability statute (MICRA) has worked to control liability losses, much to the consternation of plaintiffs' attorneys in the golden state. But it didn't happen in Washington, because the trial lawyers' friends in the Senate wiped out the reform in the final bill.

Which is it - man is one of God's blunders, or God is one of man's blunders?

Biologic warfare does not necessarily need to generate from foreign sources. In The Dalles, Oregon, 751 people who ate or worked at salad bars in 10 restaurants, developed salmonella infection from the identical strain of bacteria cultured at the nearby Bhagwan Shree Rajneesh colony. Apparently, followers of the Bhagwan were angry at the community, and deliberately contaminated the salad bars in reprisal. Reporting in JAMA, investigators from the Center for Disease Control and Prevention, accumulated evidence to establish the link, and warned "if investigation of a large and cryptic outbreak implicates a mechanism of contamination that does not reflect established patterns, then the possibility of intentional contamination should be considered.

When stupidity is a sufficient explanation, there is no need to seek another.

In a remarkable episode of "They did what?" the American Medical Association, signed a marketing alliance with Sunbeam Corp. Historically, the AMA has never given its endorsement to any commercial product. Most assuredly, the credibility of the organization would become suspect if the agreement were to go ahead. Many members and others outside the AMA have demanded a reversal of the action, and P. John Seward, MD AMA executive vice-president, has admitted the action was an error. Purportedly, proceeds from the agreement, which were expected to total millions of dollars annually, would be channeled into health education projects. The House of Delegates, the policy directing body of the AMA, will demand an explanation at the December meeting.

If God had wanted man to drive, he would have provided parking places.

Out there in the dangerous motorized world, statistics demonstrate that it is increasingly dangerous to operate a car. Car to light truck (pick-ups, vans, sport-utility vehicles) accidents are on the rise. The possibility of a fatal outcome is four times greater in the car when colliding with a light truck. Explanation is simply that a standard car weighs from 2200 to 3400 lbs, while the light trucks go at 3600 to 4200. Bigger, stronger and heavier doesn't always win, but that's the way to bet, and in fact, it's pretty cheap health insurance.

"The vote means nothing to women. We should be armed." E Jong

"Women do not need artificial handouts, such as quotas, " according to Anita Blair, head of the *Independent Women's Forum.* Contrarily, Patricia Ireland, head of the *National Organization of Women (NOW)* says that affirmative action for women is not obsolete. Both women voters and collective data support Ms. Blair. More than 2/3 of women voters in California voted in favor of Proposition 209 which banned special treatment for women and minorities by state agencies and schools. Figures indicate that among workers ages 27 to 33 who don't have children, women earn 98% of men's incomes. Women now own eight million firms in this country, compared to less than half that just a decade ago. The professions are even more demonstrative as 35% of new doctors are female, up from 9% in 1970, and 42% of new lawyers are women, up from 7% in 1970.

I respect faith, but doubt is what gives you an education.

A 72-year-old woman had a routine chest x-ray prior to arthroscopic knee surgery. The radiologist noted a "poorly defined rounded density" in the base of the left lung. The report was filed in the back of the patient's chart without comment or follow up. Seven months later the patient suffered chest pain, and her internist ordered a coronary angiogram, which was unremarkable, and also a chest x-ray. The radiologist compared this film with the previous one, and described an increase in the size of the lesion. He noted that the lesion might represent a tumor, and once again the report was filed away before the internist could see it. Less than two years later, the patient complained of shortness of breath and was found to have disseminated metastatic lung cancer, which proved to be fatal. The malpractice complaint was settled for $200,000, with 12-1/2% to the radiologist and 87-1/2% to the internist. Obviously, the amount would have been much more if the patient had been younger. **Moral:** read and follow up on abnormal lab and x-ray reports.

Now about your peer review system.

In the upper Amazon basin an Indian tribe executed a medicine man for practicing "bad medicine." A council of native healers of the Achuar tribe sentenced Hernan Sundy to death after finding him guilty of killing five people who died after receiving his treatment. "He was warned not to cause more misfortunes, but he did not pay attention." The community's healers met, sentenced him to death, and he was summarily shot.

Addenda—

- One of the keys to happiness is a bad memory.
- Teddy Kennedy would have made an excellent bartender.

Aloha and Keep the faith.—rts ■

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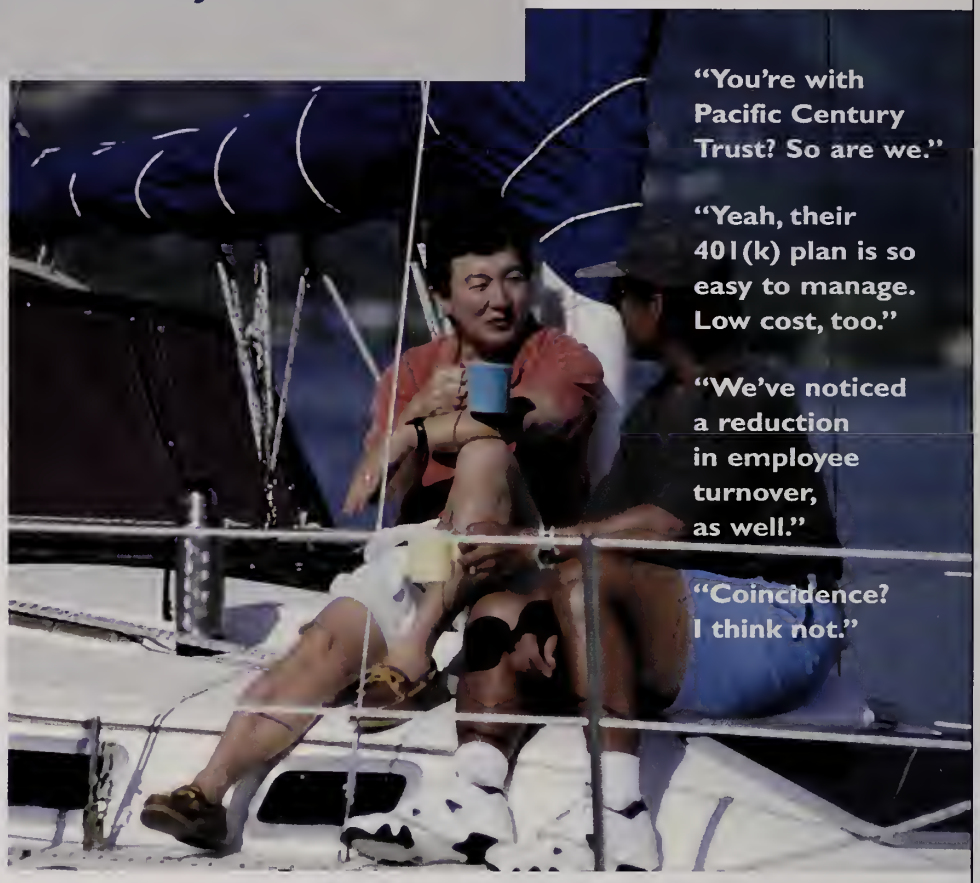
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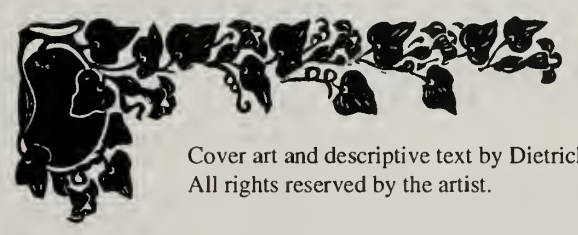
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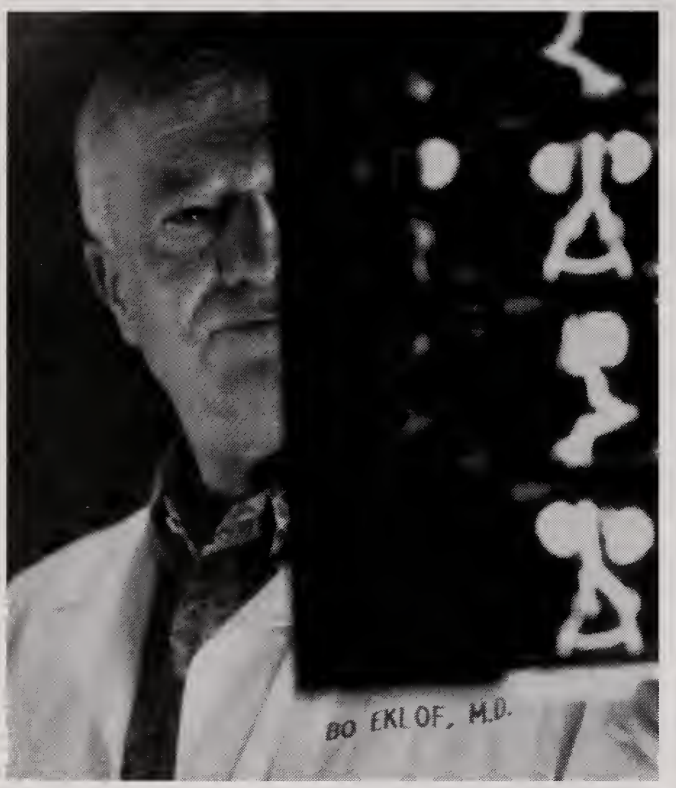
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Because *Ulu* branches break easily it is risky to climb for the fruit. A proverb says the entrance to the underworld is from the end of the breadfruit (*Ulu*) branch.



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– Friday Noon Conference –
PRO Data on Pneumonia Therapy and Congestive Heart Failure
Roger Kimura, MD and Nathaniel Ching, MD
October 24, 1997, 12:30 - 1:30 p.m.
Doctors Dining Room
Learning Objectives –
At the conclusion, participants will be able to:
- Evaluate treatment modalities in Congestive Heart Failure in the Medicare population.
- Emphasize the utilization of ACE Inhibitor or their alternatives.
- Determine improvement in the quality of care in Pneumonia therapy.

– Friday Noon Conference –
One Year at the Kapolei Clinic
Charles Kelley, MD; Ramon Pajarillo, MD and Helen Aldred, MD
November 7, 1997, 12:30 - 1:30 p.m.
Doctors Dining Room
Learning Objectives –
At the conclusion, participants will be able to:
- Understand the challenges and rewards of opening a satellite clinic within the Straub System.
- Discuss the problems and solutions that may be applicable to a wide variety of practices throughout the Straub family of clinics.

– Friday Noon Conference –
Treatment of Acute Myocardial Infarction
Roger L. White, MD
November 21, 1997, 12:30 - 1:30 p.m.
Doctors Dining Room
Learning Objectives –
At the conclusion, participants will be able to:
- Describe current treatment and pathophysiology of Acute Myocardial Infarction (MI).
- Review PTCA in Acute MI.
- Summarize the GUSTO Studies.

We would like to acknowledge the Educational Grant from Pfizer Pharmaceuticals.

Please call Fran Smith at 522-4471 for more information.

Editorial

The Harry L. Arnold Jr. MD Hawaii Medical Journal Case of the Month

Norman Goldstein MD
Editor



Harry L. Arnold Jr. MD

A new feature for the Hawaii Medical Journal will be introduced with the January 1998 issue. Our new monthly feature, "The Harry L. Arnold, Jr. MD / HMJ Case of the Month" will publish case reports from Hawaii.

Reports accepted for publication should represent uniquely Hawaiian, or Pacific Basin, subject matter. We encourage submissions from Hawaii and other Pacific Basin locations. Our medical practices are rich in content, and this new forum will allow sharing of topical issues in a brief report. We will limit the content to no more than 2 published pages, with no more than 2 total figures, tables, or images, and 10 or fewer references. The Instruction to Authors are published in the June 1997 HMJ issue on page 157.

The purpose of the column is to introduce a forum for presentation of medical problems which are of interest and importance in our region. There are many medical conditions in our region (e.g. Kava dermopathy, leptospirosis, Hansen's disease, tropical pyomyositis) which are culturally or epidemiologically unique. A case report format allows academic discussion of some relatively rare conditions, and serves to refresh the knowledge of those geographically singular diseases we may have come to regard as commonplace. The HMJ will thus become a repository for reports of those disease processes requiring unique knowledge for treatment and diagnosis in our Medical Ohana.

This new feature will honor the Editor of the Hawaii Medical Journal for 41 years, Harry L. Arnold, Jr. MD.[1] We are pleased that Benjamin W. Berg, MD will serve as editor for this new section.

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Until there's a cure, there's the American Diabetes Association

Presidents Message

Leonard Howard MD

In this first message to you as your president, I would like to share with you my thoughts about the role of the HMA in the current medical practice environment. We constantly hear comments that the reason we don't have physicians beating down our doors to join is that we lack relevance. Is this really the case, or are other factors impacting on us? What does the charge mean? The term itself is simple: **Relevant** - *bearing upon or relating to the matter in hand; pertinent; to the point.* Let us look at some of the current and some continuing activities of the HMA and see if we lack relevance. What is going on now that is of concern to the HMA?

PGMA bankruptcy - When it was announced that PGMA was folding and that many thousands of patients would be without care, and that many physicians would not receive payment for care already delivered to subscribers, the HMA got involved. We attended the court hearings, listened to the legal dealings, and realized that the physicians were going to take their place far down the line of individual creditors if the stated goal of "Keeping the hospitals happy" was carried out. When this was reported to HMA Council, Dr Ali Bairos reported his solution of filing a small group lawsuit. Council voted to join with Dr. Bairos and, in addition, survey all HMA physicians as to their outstanding claims. When all reports were in, the HMA physicians, as a group, represented by far the largest creditor. Dr Spangler and I set up a meeting with the State Insurance Commissioner, Rey Graulty, and the lawyers handling the reorganization process. The concerns of the HMA were expressed, and we received assurances that the HMA would be treated in the same manner as the hospitals, pharmacies, and other health care providers. In September we received a progress report from Mr Graulty's office which affirmed this assurance. A summary of this report will be published in the Hawaii Medical Newsletter. Relevant? You bet!

Tort Reform - In mid-September we received a notice from the Committee on Judiciary of the House that there would be a Public Hearing on Tort Reform held on Oahu Thursday, November 13, 1997. Because we represent the physicians of Hawaii, we were sent this notice, requesting us to testify. Our testimony is already drafted, and will be presented to Chairman Tom's committee at the hearing. We were already aware of the Administrative interest in Tort Reform because of an invitation to join a coalition of interested parties to lobby for tort reform in this coming session. Your HMA was represented at the first two meetings of the coalition, where we were very forthright in our insistence that relief from joint liability would not be extended to the tobacco industry. When the tobacco lobbyist showed up at the second meeting and offered RJR money to put on a dinner on Maui, we withdrew from the coalition. HMA Council approved this action. In this situation, the HMA will provide strong testimony for tort reform as we did in the past. Our last involvement with tort reform resulted in the formation of the Patient Conciliation Panels, one of the most successful methods of reducing the number of medical malpractice suits in Hawaii.

Relevant? You Bet!

The Times are a-changin - Where is the HMA on the evolution of managed care in Hawaii? We stand right alongside the AMA insisting on **physician control** of managed care organizations. AMNews top story Jan 20, 1997 reported that for all physicians, the percentage holding managed care contracts increased from 55.7% in 1986 to 69.6% in 1992. I don't think the direction has changed since then. For the young physicians, 0-5 years in practice, the figures are 56.5% and 72%, respectively. Maybe the reason we do not attract young physicians as members is because we are being perceived as a solo-practice-only organization, and the younger physicians are not interested. If we are to represent and be advocates for **all** the physicians of Hawaii, it is necessary that we not take a strong stance on any position that positively affects one group of physicians but negatively affects another. The HMA must support the **freedom of choice** for patients to see the physician they want, and the right of the physician to practice in the situation in which he/she chooses. There are many issues that affect **all** physicians in Hawaii. It is in these issues we find our relevance.

Medical School Hotline

Role of the Clinical Faculty in Pediatric Medical Education

Richard Y. Mitsunaga, M.D., F.A.A.P.
Clinical Professor, Department of Pediatrics
John A. Burns School of Medicine
University of Hawaii

In 1984, fewer than 5% of all physician-patient contacts resulted in hospitalization. Nevertheless, clerkships for trainees at all levels were predominantly hospital-based inpatient experiences.[1] Over time, academic departments and training programs evolved to be subspecialty based and located in tertiary care centers which had scant contact with the physicians who referred the cases.

Of course, many specialties require a primarily in-patient experience of its trainees; this is particularly true of the surgical fields and most medical sub-specialties. Practice in the primary care areas, on the other hand, is mainly an out-patient experience and becoming increasingly so because of medical advances and other forces including managed care.

Like other primary care specialists, pediatricians have noted that a larger portion of their patients who previously required hospitalization are now routinely managed on an out-patient basis. The combination of the increasingly ambulatory nature of pediatrics and the validity of classic, in-patient based training of pediatricians was generating more and more questions.[2]

In Hawaii the Department of Pediatrics at the John A. Burns School of Medicine (JABSOM) is the direct descendent of a community hospital residency program at Kauikeolani Children's Hospital. The program was integrated into JABSOM 24 years ago with Dr. Sherrel Hammar as Chairman and Professor. He made two important decisions which have guided the program since its inception as a university residency: (1) Every in-patient would be a teaching patient and (2) Clinical faculty would be an integral part of the program.

The clinical faculty who augmented the small number of faculty emphasized to the house-staff that patient care is a continuum which starts with an out-patient diagnosis, admission and hospital treatment, and post-hospital follow-up. The manner in which clinical faculty are utilized in the Department of Pediatrics has evolved over the years by observing four principles:

One, all pediatric admissions to Kapiolani Medical Center for Women and Children are teaching patients. Admitting pediatricians, whether clinical or regular faculty are expected to interact with residents of different levels according to a protocol designed to maximize the teaching value of the patient for the resident. (This protocol was redefined at a joint resident-faculty retreat in 1997). This interaction determines the day-to-day management of the patient.

Two, teaching on the general pediatric ward is accomplished by a team of two regular and two clinical faculty members who are assigned one month rotations. Accordingly, twenty-four clinical faculty members spend part of each week-day morning for a month tending to teaching duties.

The residents benefit from the perspective that the clinical faculty can give on inpatients regarding pre and post hospital management, family dynamics and use of community resources. The clinical faculty benefits from the close exposure to residents, regular faculty and the stimulus of working on a hospital service. The Department of Pediatrics experiences no difficulty in obtaining volunteers for this duty.

Three, clinical faculty members provide community-based ambulatory experience for residents as well as medical students. In contrast to the hospital based ambulatory experience which provides care for children who need primarily ongoing sub-specialty care, the community-based ambulatory experience focuses on continuity, wellness, family dynamics and common illnesses which are managed in the office.

The community-based ambulatory experience with clinical faculty members offers residents more than patient management. It is their introduction to office practice. Residents have their choice of practice setting from solo or small group practice to large staff-model multi-specialty groups. Residents are exposed for the first time to considerations regarding an office's physical design; business aspects such as employee matters, accounting, billing and collections, and medical records systems; appointment systems and telephone techniques; patient flow; purchasing; and office meetings. Residents can also learn about issues which confront physicians such as division of responsibilities, decision making, continuing medical education and dividing income; nursing job descriptions; special office areas (hearing and vision screening, minor surgery); office laboratory procedures and relations with local specialists such as pharmacists, school counselors and other community resources.[3] The rotation can be tailored to address each resident's interests and needs.

Four, clinical faculty who are subspecialists provide rotations in their offices or in the clinic for experience within their sub-specialties.

The validity of the educational approach utilizing clinical faculty and community experience by the Department of Pediatrics has

been established in several ways. The graduates of the program continue to practice successfully in this State in both community and academic settings. In addition, the Residency Review Committee (RRC) for Pediatrics requires increasing amounts of community-based experience of pediatric trainees. Finally, Pediatric Education in Community Settings is the topic of an increasing number of papers and seminars.[4]

Ironically, many of our best clinical faculty are not well known in the hospital. These are physicians who have outstanding out-patient skills and keep their patients out of the hospital. The department hopes to maximize resident exposure to such clinicians. Of course, all clinical faculty are expected to impart their techniques on remaining current in their specialty to the residents.

The role of the clinical faculty in pediatric education is subject to constant evaluation, modification and improvement. The resident initiated faculty-resident retreat of 1997 is the first of what is hoped will be an ongoing process. The faculty must increasingly learn principles of adult education and improve on feedback mechanisms to validate continually the worth of its contributions to resident education.

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Military Medicine

Tragedy in Guam: One Doctor's Chronicle

Nathaniel B. Berg MD
Major U.S. Army
U.S. Naval Hospital Guam

In the early morning hours of August 6, 1997, I received a call that began in a manner well familiar. The physician on duty in the emergency room at U.S. Naval Hospital Guam (USNH, GU) called me to request an emergent non-contrast head CT. She was evaluating an elderly male who was found to be non-responsive and a cerebral vascular accident was thought the likely etiology. I asked a few questions about the case and told her I'd be on my way in as soon as I called the CT technologist. The routine nature of the scenario for the late night encounter with my colleagues in the emergency ended with her next declaration. She had just received report of a possible crash of a Boeing 747 passenger plane on Nimitz Hill. I live on the top of Nimitz Hill and had just fallen asleep when she called. I confidently informed her that no plane had crashed into Nimitz Hill. I surely would have awoken at the sound of such a disaster, particularly if one of the monstrous 747s that rumble over my house many times a day was involved. I called the CT technologist and dressed, with little thought of the tail end of my discussion with the ER. As I opened my back door the smell of jet fuel filled the air.

My route to the hospital takes me by a look-out in front of the last stand of the Japanese Imperial Army on Guam in World War II. The vista is usually of the non-inhabited, jungle-covered side of Nimitz Hill, as it slopes into a ravine. Through the light rain, the entire side of the hill seemed engulfed in flames. A Guam Police car had pulled over and an officer was standing in the road. As I approached his face spoke horrification. I stopped and realized that I was the only Radiologist for the hospital closest to a disaster the size of which I could only guess. I continued to the hospital. I provided visual confirmation of the crash and the entire hospital staff was recalled. The mass casuality drills we so diligently practice on Guam was now 'the real thing'. The crash site was difficult to access. The rescue effort was completed in a cooperative manner by the United States Military and local civilian fire and rescue personnel.

As the sole Radiologist I remained predominately in the Emergency Department. A barrage of requests were relayed from the five emergency department exam rooms. Order was made of the requests and films were completed and interpreted rapidly. The urgency to interpret a large number of films rapidly while continuing to coordinate the radiographic triage did not allow me to sit in a dark quiet room with my Dictaphone. I read the films standing at the ER view box with surrounding light and mass commotion, accented by agonizing screams. I gave verbal reports to the physicians, as a technologist wrote my opinion on the film jacker. CT scans were brought for interpretation by runners. We could not spare a portable machine for the intensive care unit. The few stable survivors had their needed X-rays completed in the Radiology department. The identification of patients by name was usually not possible. As practiced in our drills, all patients were assigned numbers as they entered the Emergency Department. This would prevent error in matching patient to films.

Two days following the crash I received another unique phone call. I was informed that I would need to complete X-rays on all of the remains of those who did not survive the crash. The exams would be needed to aid in identification of the victims and would possibly help in assessing the cause of the accident. The senior technologists and I inspected the temporary morgue to assess our unfamiliar task. An enormous warehouse had been partitioned into areas labeled intake, medical photography, personal effects, pathology, anthropology, finger prints, mortuary and data entry/processing. Beneath a sign labeled RADIOLOGY we were to set up shop. As explained by the National Disaster Management System (NDMS) and Disaster Medical Operations Readiness Team (D-Mort) team leaders, the body bags were brought from the crash site in refrigerated tractor trailers. They would be assigned a folder and would pass through each section. We were to open the bags, inspect the contents and complete appropriate radiographs. Anything that might aid in identification was to be recorded. The task was to be completed as rapidly as possible without compromise of information. I knew we would need off-island personnel and material resources to complete the task.

Building a radiology suite at the morgue site was not feasible. We would need three portable X-ray units. Two to run continuously while a third charged. A processor, a label flasher and light boxes

would need to be available. We borrowed portable units from Guam Memorial Hospital (GMH), requisitioned a bathroom for the processor, and took the rest of the equipment from our own hospital. If two units were to be running simultaneously, a large number of cassettes would be needed, including scoliosis cassettes. Tripler Regional Medical Center (TRMC) sent the cassettes and two near new portable units to allow return of the GMH units. Three technologists were needed for each machine. One to shoot and two to position and hold cassettes and remains. One person was needed in the darkroom and the another to keep order of the films and records. The heat in the warehouse and the nature of the work made obvious the need for frequent breaks. Several additional people would be needed. A team leader and a Radiologist for each shift added to the needed manpower. We were to work twelve hour shifts until the work was done. A call went out for assistance from the U.S. military facilities in the Pacific Rim.

Harlan Herr, CDR, MC, USN, Radiology Department Head at USNH, GU was on leave at the time of the accident and was on his way back. Technologists from the 121st U.S. Army General Hospital in Seoul, Korea and Naval Hospital Yokosuka, Japan arrived within 24-hrs. With the arrival of Commander John Maher, MC, USN from Naval Medical Center San Diego (NMCSD) we began our work at the morgue, while continuing to manage the Naval Hospital Guam Radiology Department. Terry Yeager, MAJ, MC, USAR came from TRMC with three technologists from his facility and two from Naval Clinic Pearl Harbor. More technologists were to arrive from NMCSD, Bremerton Naval Hospital and Naval Hospital Camp Pendelton allowing us to run a normal schedule at Naval Hospital Guam and crews at the morgue 24-hrs a day. CDR Robert Parkinson, a radiologist from NMCSD possessed Korean language skills that were to prove useful in comparing our exams to antemortum radiographs that arrived from Korea, and in communicating with Korean nationals.

The technologists and I shared a fear of the unknown. We knew that we would be seeing things that we all had hoped to live and die without seeing. Radiographing charred remains in various states of decomposition was not something we had chosen to do, and no one knew how we would react. The NDMS team leaders recommendations were later given to all of our team members. He advised us to focus on the importance of our work. Through high quality radiographs, remains could be quickly and accurately matched with available antemortum films. This would allow delivery of remains to loved ones. The possession of remains, no matter their condition, is essential to grieving and closure in virtually all cultures and religions. Our work would clearly help the families of the victims. Without our work, their suffering might be prolonged.

After a body bag was brought to our work area, we visually examined the contents of the bag. A scoliosis film was used to survey for radiodense components, personnel effects, and other non-human elements, e.g. aircraft parts, that were not seen on intake. Radiographs that might help in age or sex determination were completed. Typically, these included views of the ends of the long bones, hands, feet and spine if they were present. For matching to antemortum exams, we would attempt standard positioning of the

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remains as for common clinical radiographs. Thus, if a skull was present, a paranasal sinus series and a skull series would be completed. Mastoid air cells and frontal sinuses have extraordinary variability and are excellent sources of X-ray matching. As views of the chest, wrist, ankle, cervical and lumbar spine are common, these were completed when possible. The scout scoliosis films often demonstrated unexpected findings, such as osseous structures from more than one victim. These were separated appropriately.

A group of psychiatrists, psychologists and social workers sent from NMCSD made up the U.S. Naval sprint team sent to provide psychological support. They were critical to help our teams working full time. They met with each individual at least once every three shifts and with the entire team as a group daily. We followed their advice to take short breaks every two hours, change our clothes before going home, refrain from eating in the warehouse and to look out for each other. To date, no team member has reported difficulty working or sleeping, nightmares, or other signs indicative of lasting adverse emotional consequences of the work completed. We X-rayed every single remain brought to the morgue. Even the smallest fragments were examined with an attempt to identify anatomic origin. The anthropologists would further examine the remains and not infrequently would ask for additional views of individual bones known to aid in age estimation. As explained to us, all efforts were to be made at identifying the remains including DNA testing of all remains not otherwise positively matched with a victim.

Several weeks later our job was complete. The Radiology team was made up of members from many different commands around the Pacific Rim. All became quickly focused on expediently and expertly doing everything we could to unite victim's remains with loved ones. This maintained the esprit of the teams quite high throughout. Many attributed the success of arduous work at the morgue site to military readiness training and attention to the preventive measures recommended by the NMCSD sprint team. We were proud to learn that many of our exams had been critical in identification of remains.

Major Berg is a Staff Radiologist assigned to U.S. Naval Hospital, Guam.

Book Reviews

All Stings Considered
First Aid and Medical Treatment of Hawaii's Marine Injuries
Craig Thomas MD and Susan Scott

Reviewed by Norman Goldstein MD

Craig Thomas MD, and emergency room physician, and Susan Scott, a registered nurse and marine science writer, have created a superb book in *All Stings Considered*. Their years of clinical experience and their participation in activities on, under, and around Hawaii's waters make them the authorities on marine injuries in Hawaii.

This compendium, well researched and well written, is easy for the general reader to understand and will be a handy reference for all water enthusiasts. It is also an excellent medical text for the health professional. No other book specifically addresses the Hawaii aquatic environment. The many articles on specific marine injuries that exist in the medical literature are difficult for the lay reader to obtain and understand.

Every emergency room and poison control center should have a copy of this book at hand. Paddling, sailing, and swimming clubs, along with high school and college athletic coaches, will use it for accident prevention and quick treatment. First responders, emergency physicians and staff, pediatricians, family practitioners, internists, and dermatologists will find it valuable as a speedy reference.

In their first joint publication effort, the authors have compiled a wealth of marine information.

Editor's Note: This is a must-have and must read for every health professional in Hawaii.

The Honolulu Heart Program, An Epidemiology Study of Coronary Heart Disease and Stroke

Reviewed by Roger L. White MD
Department of Cardiology
Straub Clinic & Hospital

It is my pleasure to review and recommend strongly the newly published book, **The Honolulu Heart Program, An Epidemiological Study of Coronary Heart Disease and Stroke** as edited by *Dr Abraham Kagan*. The Honolulu Heart Program study has gained international recognition over the past 30 years for its thorough and ongoing research and has become probably the second most frequently quoted study to the Framingham study on coronary artery disease from Massachusetts. As a practicing cardiologist in Honolulu, I have had many patients who have been enrolled in this study, as I am sure most clinicians in our community have been touched one way or another by this study. I have heard many of the authors speak at conferences over the years, and its is a pleasure to have the data all in one place in a book form. It is much welcomed.

The book is edited by Dr Abraham Kagan who has coordinated the efforts of 13 contributing editors. It is 204 pages, well organized and very readable. The Honolulu Heart Program has followed the epidemiology of coronary heart disease and stroke in 3,006 Hawaiian men of Japanese background for more than three decades. This is a monumental task of organization and persistence, and has yielded some very valuable data which we can all translate into our day-to-day care of patients in the prevention of heart attack and stroke. The most significant conclusion from this study was to confirm a gradient in coronary heart disease prevalence, incidence in mortality among Japanese males living in Japan, Honolulu and California, with the highest incidence of cornary artery disease being in California, the lowest in Japan, and moderate in Hawaii. The correlation with changes in diet and lifestyle with increased Westernization correlates very well. There is also confirmed a reverse gradient for the prevalence of stroke from the same three

sites, with the highest incidence of stroke being in Japan, and a lower incidence in Hawaii. The importance of these studies and the influence of diet with increasing fat content, increasing myocardial infarction cannot be underestimated.

The chapters in the book are well organized and review lipoprotein study analysis, hypertension, coronary heart disease, stroke, pathology, mortality rates, recent review of data, and looking to the future with regards to aging and dementia. The bibliography for each chapter is complete and helpful. The Honolulu Heart Program has had several firsts in the epidemiology of heart disease. Some of these include the inverse relationship between alcohol and coronary artery disease, for which we can all be grateful in justifying one to two small drinks a day to prevent heart attacks (albeit, unfortunately the rates of hemorrhagic stroke, cancer and mortality increase with increased alcohol). Also, another first in The Honolulu Heart Program was to show the inverse risk factor relationship between HDL cholesterol, in that the higher the HDL level, the lower the risk of coronary atherosclerosis. This is particularly well documented in the chapter on Pathological Correlations by Dr Grant Stemmerman where he reviews the autopsy studies on 288 men involved in the study. The Honolulu Heart Program is also the first to document a correlation between a stressful lifestyle and what we call type A behavior, and increased incidence of coronary artery disease.

I feel that this book should be on the bookshelf of every cardiologist, internist and family practitioner in Hawaii. It is unique to the region that the study as important on an international basis. This study helps lay the foundation for future epidemiologic studies of different ethnic groups, gender, lifestyle, diet and exercise programs in the prevention of coronary heart disease and stroke. As an example, we already know that although coronary heart disease is less common in women, its prevalence increases as women get older, and women are more likely to have a fatal myocardial infarction then men. Also, as our population ages, the effects of aging and dementia will be very important to study to look at epidemiologic factors which may, if prevented, improve the quality of life. Hawaii represents a unique community whereby different ethnic groups and diet can be evaluated. As we move into the next century, we are truly becoming a world community in the informational age, and by doing epidemiologic studies one can better understand a disease process, so that in the future better prevention can be done. The Honolulu Heart Program has been a cornerstone and basis for future studies.

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Commentary

Russell T. Stodd MD

My brother, John, was the oldest of four boys surviving in the Stodd family. Partly because he was the oldest, but mostly because of his character and personality, John was the acknowledged leader, and commanded the most respect. From my earliest recollections, John was generous, kind and protective. He was wise, and seemed always to be right, but he rarely offered advice. When asked he would offer his opinion, but always with a few kind words and without judgment. He was a fighter pilot in the famous Black Sheep Squadron during the war, and was a prisoner of war in Japan. He was called back in the Marine Corps and flew in Korea as well. We admired and revered him. After a lengthy legal career he retired to play some golf and travel.

When John became ill last year with myeloma, his HMO doctors had difficulty making a diagnosis. Because of severe neck and head pain, his initial "diagnostician" treated him with increasingly potent analgesics, but never pursued a diagnosis. After several months, John was referred to a neurosurgeon for possible spinal fusion because of worsening and unrelenting pain. The surgeon obtained radiographic studies which revealed the presence of a mass high in his neck as the source of his difficulty. Biopsy of the mass revealed the presence of myeloma. Strike one! He was treated with irradiation and chemotherapy which was debilitating, and precipitated a pulmonary embolus. Strike two! Coumadin was added to his therapeutic program, but monitoring was careless, and his dose was constantly juggled. In May he became severely anemic. It was evident that he was bleeding, and he was transfused three units. During this time, I advised him by telephone about medications and lab studies, and tried to be reassuring. In our last conversation it was obvious that he was bleeding from his GI tract with hemorrhage into his naso-pharynx and where else? I recognized that he was Coumadin toxic and I suggested that he question his doctor about that possibility. The following day he saw his last HMO doctor, who had never seen John prior to that time. She advised him to continue the Coumadin. Strike three! You're out, John. Three days later, on June 16, Father's Day, he died at home from a massive cerebral hemorrhage.

So our beloved family leader and hero was gone, quite suddenly and before his time. Is there blame to be assigned here, and if so to whom? The answer is, yes, there are plenty to blame. Specifically his doctors and their system of indifferent care are at fault. The HMO and their nonchalant corporate practice of medicine was disgraceful. The initial internist was useless when he treated John with increasingly strong pain medication while never seriously seeking a diagnosis. When the diagnosis was made by a neurosurgery consultant, John's care was spotty at best. Still, after initial therapy for his tumor, and the pulmonary embolus, he was gaining strength. While on Maui in February his kidney function was normal, his calcium and serum proteins were okay and he appeared to have a good prognosis.

The matter of his coumadin therapy and the apparent disregard for obvious toxicity is shameful. Then, of course, there is blame for myself as well. I was certain he was toxic from coumadin, and should have strongly recommended prompt remedial action but instead merely made a weak recommendation to question the HMO doctor.

I remain angry and sorrowful. I miss my brother every day, and feel remorse at my failure. The anger is stored up for casual, insensitive practice of corporate medical care. Even if challenged about this sad case, the corporate spokesman would merely state that this patient slipped through the cracks, and after all, he was 74 years old. He had a serious disease, so how much time did he have left anyway? As an HMO executive once stated, "We see patients as numbers, not individuals. We are a mass-production medical assembly line, and there is no room for the human equation in our bottom line."

What doctor really knew my brother? Who cared? A thoughtful intelligent family doctor would have helped John stay alive for an indefinite time by simply paying attention. One patient and a caring physician with an ongoing record, pertinent and calculated lab work, timely follow-up, proper advice on therapy and appropriate activity; in other words, a doctor who cared. Make no mistake; a strong doctor-patient relationship is critical to successful treatment. Separated from a single, responsible physician, the patient is at great risk. Think about it. Where is the HMO going with the healing process?

Editor's Note:
It's not your failure, Russ. It is the failure of medicine today. Whether in a HMO, another type of group practice or solo practice, let us learn from the story of "Brother John." Patients are not numbers, they are individuals. Mahalo for sharing your sorrow with us.

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Application of Informed Consent Principles in the Emergency Department Evaluation of Febrile Children at Risk for Occult Bacteremia

Loren G. Yamamoto MD, MPH, MBA*

Informed consent requires that the risks and benefits of a particular diagnostic and therapeutic plan be reviewed with the patient, including the disclosure of alternative diagnostic and treatment approaches. Although it could be argued that it is difficult to present all the diagnostic and therapeutic options to parents in the E.D. management of febrile children at risk for occult bacteremia, it is the purpose of this report to describe the experience with following these principles of informed consent in a group of these children.

Methods: Convenience sample of febrile children presenting to an E.D. at risk for occult bacteremia. A standardized information sheet was presented. A parent survey of preferences followed.

Results: In 37 patients, most of the parents chose no tests and preferred to be involved in the medical decision making process for their child.

Conclusions: While preferred by parents and supported by AAP, the process of informed consent, for febrile children at risk for occult bacteremia, is time consuming and often not possible when the E.D. is busy. Physicians may find it desirable to make decisions from an informed consent perspective to a comfort level dependent on time availability, parents' comprehension ability, and individual personal practice preference.

Keywords: informed consent, occult bacteremia, otitis media, blood culture, white blood count

*Emergency Services,
Kapiolani Medical Center
For Women And Children
Department of Pediatrics
University of Hawaii
John A. Burns School of Medicine

Correspondence:
Loren G. Yamamoto, MD, MPH, MBA
Department of Pediatrics
1319 Punahou Street, #718
Honolulu, HI 96826
(808)973-8387
Fax (808)949-4232
e-mail: loreny@hawaii.edu

Introduction

While the authority to make medical decisions used to rest solely with the physician (doctor knows best theory), this is now considered to be unacceptable.[1] In addition to sources in the medical literature[2-6] and court conclusions,[6] the American Academy of Pediatrics (AAP)[1] and the Joint Commission on Accreditation of Healthcare Organizations (JCAHO)[7] have confirmed support of informed consent, which requires that the risks and benefits of a particular diagnostic and therapeutic plan be reviewed with the patient. This review should include the disclosure of alternative diagnostic and treatment approaches.[1-7] Decision-making power or authority is increasingly seen as something to be shared by equal partners in the physician-patient or physician-parent relationship.[1] While reports in the literature have indicated that this is the proper approach to take, such a practice is time consuming.

In the evaluation of the febrile child at risk for occult bacteremia, sources in the literature have recommended divergent diagnostic and therapeutic approaches (Table 1).[8-19] According to informed consent principles, the management of such cases should include the disclosure of all these approaches.[1-7]

While physicians may assume that patients generally want more tests and more treatment in order to avoid as much risk as possible, a published survey of parents showed that parents often preferred the opposite of this (fewer tests, less treatment, more risk) in a hypothetical case scenario involving a 6-week old febrile infant.[20] This indicates that when a range of diagnostic and treatment options are presented to parents, they may often choose the less aggressive choice even if it involves more risk. This also indicates that true informed consent with full disclosure of alternatives, is often not practiced as a standard in this clinical scenario. Although it could be argued that it is difficult to present all the diagnostic and therapeutic options involved to parents, it is the purpose of this report to describe the experience with following the principles of informed consent in a group of actual children presenting to an E.D. with fever at risk for occult bacteremia. Quality of care may be improved by understanding this process better to determine ways of optimizing the informed consent process.

Background

The emergency department evaluation of young febrile children (3 months to 3 years of age) at risk for occult bacteremia is a recognized controversy. Actual patient data supporting a single standardized diagnostic evaluation and treatment approach is lack-

Table 1.—Some recent recommendations in the literature for children at risk of bacteremia.

Baraff (1993, expert panel practice guidelines)[8,9]
CBC if temperature ≥ 39C. If WBC > 15,000, obtain a blood culture and treat with ceftriaxone. Obtain urine cultures in all males under 6 months and all females under 2 years who are treated with antibiotics. Less preferred option is to obtain a blood culture and treat all children with temperature > 39C with empiric antibiotics.

Baraff (1993, review article)[10]
Same recommendations as above.

Baraff (1992, management guidelines)[11]
Blood culture and empiric antibiotics. CBC is not recommended.

Bass (1993, 519 patients)[12]
WCB ≥ 15,000 and fever ≥ 39.5 C identify children at high risk and should be treated with antibiotics (amoxicillin/clavulinate orceftriaxone). Routine treatment of others does not appear to be indicated.

Downs (1991, decision analysis)[13]
Blood culture and empiric antibiotics for all those at risk (2-4 months and rectal temperature > 39 C).

Fleisher (1994, 6680 patients)[14]
If empiric antibiotics are given, ceftriaxone provides a safe and effective alternative (better outcome profile compared to amoxicillin, however, not statistically significant).

Jaffe (1994, review articel)[15]
CBC. Blood culture and empiric antibiotics if WBC > 10,000 or WBC > 15,000/

Kramer (1989, decision analysis)[16]
No blood culture strategy has the greatest utility.

Lieu (1991, decision analysis)[17]
Blood culture and empiric antibiotics.

Long (1994, editor's column)[18]
No tests, no antibiotics as the preferred choice.

Singer (1995, review article)[19]
3-6 months: Urinalysis. Parenteral ceftriaxone is not effective. No blood work unless temperature exceeds 41 C.
6-24 months: CBC and blood cultures if temperature ≥ 40 C. Treat with parenteral antibiotics if WBC ≥ 15,000.

ing. Most of the controversy stems from a subjective sense of risk tolerance. Most studies and reports in the literature on this topic have identified the children at risk for occult bacteremia as those from 3 months to 36 months of age with a fever (most commonly defined as greater than or equal to 39 degrees Celsius).[8,9,13,17,18]

Reports which focus on avoiding risk (risk averse) have recommended blood cultures and parenteral antibiotics for most or all children at risk of bacteremia.[13,17] Other reports which accept prudent risk have recommended observation.[18] Other reports have recommended that white blood counts be used to assist in the decision to administer antibiotics.[8,9,12,15] If antibiotics are to be administered, the decision of parenteral or oral antibiotics must be made on similar risk tolerance criteria.[12,14,15,21,22]

While practice guidelines for the evaluation and treatment of these children have been published in the journals *Pediatrics* and *Annals of Emergency Medicine*,[8,9] published surveys of pediatricians demonstrate that there is substantial diversity in the management of these children and many pediatricians do not follow the recommendations in the published guidelines.[23,24] It is NOT the purpose of this report to examine the superiority of one strategy over another.

Methods

A single page information sheet was drafted explaining bacteremia, urinary tract infection, meningits, and pneumonia (see appendix A). Children were evaluated in the emergency department by the author (single investigator) during a normal shift schedule in a pediatric E.D. Parents were given this information sheet if all of the following criteria were met:

a. Age 3 to 36 months.

b. Temperature > 38.9 degrees C (102 degrees F) in the E.D. or by reliable history.[8]

c. No hard indications to perform tests or administer parenteral antibiotics.

d. Child is active, alert, not toxic, not irritable.

f. No specific physical examination signs of meningitis, urinary tract infection, pneumonia, or sepsis. Specifically, the following were documented: anterior fontanelle (if present) flat, neck supple, not fussy when bounced, no costovertebral angle tenderness evident, lungs clear to auscultation, no tachypnea, not coughing much, oxygen saturation in room air 98% or higher, no petechia, normal color, and normal perfusion. Patients were excluded if more than two episodes of diarrhea (per day) were present. Otitis media was not a basis for exclusion.

g. The physician had enough time (15 minutes minimum) to thoroughly review the information sheet with the parents (i.e., low E.D. patient census at the time).

The information sheet was reviewed with the parent(s) verbally. Following this lengthy verbal explanation, parents were given the information sheet to review on their own. All their questions were answered. All parents claimed that they understood the form. They were encouraged to ask more questions following all explanations.

A Tests and Treatment Selection sheet (see appendix B) was verbally reviewed with parents. The treating physician made a recommendation for laboratory work and antibiotics. It was made clear to patients that a different physician may justifiably make a totally different recommendation. It was made clear that the physician's recommendation is not necessarily what their private physician would do. It was made clear that they would not be offending the physician if they did not follow the physician's recommendation. Parents were then asked about their preferences on the diagnostic tests to be performed and the treatment. Parents were given the option of not deciding (i.e., accepting the physician's recommendation). Once parents made a decision, the advantages and disadvantages of their decision were again reviewed with them to be certain that they understood the risk level involved in their choice.

Clinical and demographic information were collected on these patients. Parent choices were stratified by demographics. There is no control group involved. Presumably, a control group would be

one in which parents had no control in any of the clinical decisions. Such a control group would be highly biased by the treatment that is imposed upon them by their physician. Thus, the statistics are presented as descriptive only (no inferential statistics).

Antipyretics were administered to all patients (either at home or in the E.D.). Temperatures were rechecked in most patients before discharge.

This study was presented to the medical center's institutional research board (IRB) for review. IRB approval was obtained.

Results

The results of 37 E.D. patients are summarized in tables 2 and 3. Ages ranged from 3.5 to 35.6 months of age (mean 14.4 months, standard deviation 9.4). Parents accompanying children ranged in age from 17 to 42 years of age (mean 28, standard deviation 7). In instances when both parents accompanied the child to the E.D., the age of the "dominant parent" was used as the parent's age for that child (tables 2 and 3). The dominant parent was the one who appeared to be making most of the decisions. Of the 37 patients, mothers were present alone in 21 cases, fathers were present alone in 2 cases, and both parents were present in 14 cases. Of the 14 cases when both parents were present, the mother was assessed as being the dominant parent in 6 cases and the father in 8 cases.

Maximum temperatures ranged from 38.9 to 41.1 degrees C (mean 39.8, SD 0.5). Otitis media with effusion was diagnosed in 22 of the 37 patients. Five of the 37 patients presented with febrile seizures. Only one of the 37 patients was on antibiotics prior to the E.D. visit.

Table 2 stratifies the parental diagnostic test preferences by demographic and clinical variables. In 2 of the 37 cases, parents did not want to make a choice. In these two instances, no diagnostic tests were performed. In 31 of 37 cases, the physician made no recommendation on whether to do any tests. In 25 of these 31 instances, parents chose to do no tests. The physician recommended "no tests" in three cases. Urine studies only were recommended in one case (17 month old female with fever and vomiting), however, parents elected for no tests in this instance. A CBC and blood culture were recommended in one case (24 month old with a febrile seizure in whom the child's primary care physician requested the tests). A complete sepsis work up was recommended in one case (a 3.5 month old). Parents concurred in these two cases.

When a diagnostic test recommendation was made by the physician (6 instances), parents agreed with this recommendation in four instances. In one case, urine studies were recommended and the parent declined this. In one case, the parent declined to make a choice and the physician's recommendation was carried out. Thus, in no instance, did parents request more tests than that recommended by the physician.

Of the 31 cases where the physician did not make a diagnostic test recommendation, there were four cases where parents requested tests. One case was a 17-month old whose parents requested a chest radiograph. In two cases, parents (of an 11-month old and a 3.5-month old) requested a CBC and blood culture. The last case was 24-month old with a febrile seizure whose parents requested a complete sepsis work-up.

Parental diagnostic test preferences did not differ significantly by any of the variables tabulated in table 2. However, the numbers here are too small to come to any conclusion.

Table 2.—Parental diagnostic study preferences (these tests were the ones actually carried out)

Parents' preference: (studies consented to)	No Tests	Tests done	Doesn't want to choose
All	29	6	2
Age			
3-5 months	3	2	1
6-12 months	14	1	0
13-36 months	12	3	1
Sex			
Male	16	4	2
Female	13	2	0
Parent			
Mother	16	4	2
Father	1	1	0
Both	12	1	0
Age ≤ 24	13	1	0
Age ≥ 25	16	5	2
Medical Insurance			
Private	13	3	1
Medicaid	15	2	0
None	1	1	1
Doctor's recommendation			
No tests recommended	2	0	1
Tests recommended	1	2	0
No recommendation	26	4	1
Max temperature			
38.9 to 39.9	16	4	1
40.0 to 42.0	13	2	1
Otitis Media			
Present	16	4	2
Not present	13	2	0
Seizure			
Present	3	2	0
Not present	26	4	2

Table 3 stratifies the parental antibiotic choices by demographic and clinical variables. In three cases, parents declined to make an antibiotic choice. In two of these cases (with otitis media), oral antibiotics were prescribed. In the third case, no antibiotics were prescribed.

There was a physician antibiotic recommendation in 31 of 37 cases (no antibiotics in 1, oral antibiotics in 28, and parenteral antibiotics in 2). Antibiotics were recommended by the physician in all 22 cases in which otitis media with effusion was diagnosed. Parents followed the physician's recommendation in most instances. However, in 8 instances, parents chose parenteral antibiotics when the physician recommended oral antibiotics. In one instance, parents chose no antibiotics when the physician recommended oral antibiotics. In one instance, parents chose oral antibi-

Table 3.—Parents antibiotic (Abx) preferences (the actual treatments carried out)

Parents' preference: (treatment consented to)	No Abx	Oral Abx	Parenteral +PO Abx	Doesn't want to choose
All	4	20	10	3
Age				
3-5 months	1	2	3	0
6-12 months	3	6	5	1
13-36 months	0	12	2	2
Sex				
Male	3	11	6	2
Female	1	9	4	1
Medical insurance				
Private	2	10	4	2
Medicaid	2	9	5	0
None	0	1	1	1
Tests done (parents' preference)				
No tests	3	19	6	1
Tests done	1	1	3	1
Doesn't want to choose	0	0	1	1
Physician's antibiotic recommendation				
No recommendation	2	2	1	1
No antibiotics	1	0	0	0
Oral antibiotics	1	17	8	2
Parenteral antibiotics	0	1	1	0
Max temperature				
38.9 to 39.9	3	11	5	2
40.0 to 42.0	1	9	5	1
Otitis Media				
Present	1	13	6	2
Not present	3	7	4	1
Seizure				
Present	0	4	0	1
Not present	4	16	10	2

otics when the physician recommended parenteral antibiotics.

Parents of 34 of the 37 children indicated that they liked helping the physician decide the treatment for their child. In two cases, parents indicated that they did not like helping the physician decide the treatment for their child. In one instance, a parent could not decide.

Temperatures at discharge declined in 31 of 37 patients compared to their admission temperature. Discharge temperatures were not obtained in two patients who presented with admission E.D. temperatures of 38 degrees or less rectally (fever documented at home). The temperature in one child did not decline. Discharge temperatures in the other three patients were not recorded on the charts. It is possible that the discharge temperatures were not obtained, or they were obtained, but not recorded.

All blood cultures obtained (five) were negative. Follow-up was arranged for all patients in a clinic or their primary care physician's office. All patients were informed to return to the E.D. if their condition worsened. No patient returned to the E.D. for a follow-up visit or to the hospital for hospitalization.

Discussion

The possibility that the wording of the information sheet used in this survey may be biasing the decisions of parents is acknowledged[25] The information sheet was written to remain as neutral as possible. Yet the infomation sheet had to be simple and short. It would be impossible to write an information sheet that is simple, short, and perfectly accurate while satisfying all experts that its wording is perfectly neutral. This less than perfectly accurate and less than perfectly neutral information sheet was adopted realizing its limitations.

It is likely that the preference choices made by parents were substantially influenced by the recommendation of the treating physician. However, the noted trend is that most parents chose no tests in the absence of a physician's recommendation. While most parents followed the physician's antibiotic treatment recommendation, some parents chose more aggressive antibiotic treatment options (parenteral) than the physician's recommendation (oral). The high number of antibiotic recommendations by the physician makes it difficult to determine what the true antibiotic preferences of the parents were. However, many children in this cohort were diagnosed with otitis media with effusion and the risk factors of each individual case had to be weighed by the physician making the individual treatment recommendation to fit the ethical standard of what was felt to be best for the individual child.

While the informed consent information disclosed during this survey was largely limited to that listed in appendix A for most cases, some parents asked for more details regarding specific aspects of their child's condition. The following issues were disclosed in lay terms on an as needed basis. It is obvious, that the disclosure of all these details would not be possible during a single patient encounter.

The frequency of otitis media with effusion[26,27] in this group of patients was high. In all instances, the severity of the otitis media was felt to be low (otitis media with effusion as opposed to acute otitis media).[26,27] Parents were informed of this and in every case, they were informed that such mild otitis media does not reliably account for the fever[28,29] and their child's risk for bacteremia and its complications are no different than a child without otitis media.[30] In patients with otitis media, empiric antibiotics were recommended whether or not blood cultures were obtained. The high frequency of otitis media with effusion accounts for most of the empiric antibiotic recommendations without obtaining a blood culture. Yet in one case of otitis media with effusion, parents declined antibiotics when they were informed that the likelihood of recovery following a course of antibiotics was only slightly better than the likelihood of spontaneous recovery[26,27,31-34] (all parents of children with otitis media were advised of this).

While patients with otitis media may be considered by some to be a "source" of fever, it is often considered to be a source that is not clinically useful in modifying risk since otitis media is associated with a similar risk of bacteremia compared to febrile children without otitis media.[30] Fever without a source can be defined as an instance in which the etiology of the fever is not apparent after a careful history and physical examination.[10] In most instances, it is

Appendix A - Information Sheet

Information: Tests and Treatment For Children With Fever Physician's Name, MD, Pediatrician

The doctor has examined your child and has found that the cause of your child's fever is probably not serious. Most of the fever is most likely caused by a virus (like the flu virus). Antibiotics will not help your child get rid of the virus. Since no doctor can be absolutely sure that this fever is only caused by a virus, we must discuss some other possibilities with you.

1. Bacteria in the blood (bacteremia). There is roughly a 2% to 10% chance that your child may have bacteria in the bloodstream. This is not necessarily bad. Children with bacteria in the bloodstream will cure themselves most of the time (even without antibiotics). However, about 1% to 5% of the time, a child may get a complication from this (such as one of the infections below). To find out if your child has bacteria in the bloodstream, we must draw a blood sample and grow this sample in the lab for 2 days to see if any bacteria will grow out. We will not be able to find out today if your child has bacteria in the bloodstream. It will take 2 days. We could do a blood count test today to find out if your child is at high risk or low risk of bacteria in the bloodstream, but this test is not always accurate. Many children with bacteria in the bloodstream have normal blood counts and many children with abnormal blood counts do not have bacteria in the bloodstream. If we give your child some antibiotics, this might lower the chance that your child will get worse if your child has bacteria in the bloodstream. An antibiotic shot seems to be better than antibiotics by mouth. If your child has had all his/her immunizations (HIB vaccine), then his/her risk of complications from bacteria in the blood is even lower.

2. Kidney infection. There is a small chance that your child might have an infection in the urine or kidneys. Young children don't usually tell us that it burns when they urinate. If untreated, a kidney infection can get worse and spread infection to the blood and brain. Children with kidney infections often have abnormal kidneys. We won't know about this since you can't feel the kidneys. You can only see them with special X-rays with X-ray dye. To check for urine or kidney infection, we need a sample of urine. We can't ask small children to urinate in a cup so for small children, we get a urine sample by putting a tube in the bladder to let some urine out. Your child won't like this, but it is quick and it won't cause any harm. Sometimes there is some bleeding from this, but this will go away on its own.

3. Meningitis (infection in the brain). There are many types of meningitis. Some meningitis is not too bad, but the bad form of meningitis can kill you or cause permanent brain damange unless it is treated early. Children with meningitis usually look very, very sick. They usually have vomiting, a stiff neck, a bulging soft spot, or a bad headache. They are usually fussy, drowsy, or don't look at you well. Since they have a bad headache, this gets worse if you bounce them while carrying (they get more fussy if you do this) or if they jump up and down. A spinal tap is needed to find meningitis. A spinal tap is painful, but it is usually quick (1 to 3 minutes), and it will not harm your child.

4. Pneumonia (lung infection). Most pneumonias are not serious if your child's oxygen level is normal (we measured this with the red light). To find out if your child has pneumonia, we need to do a chest X-ray. X-rays can be harmful, but the dose of X-rays in a chest X-ray is very small. Doctors believe this to be very safe.

Doctor's Survey: Since your child has fever, you should know that the tests and treatment for this are very controversial. If you ask 10 pediatricians what to do, you will get many different answers. Most office or clinic pediatricians would not do any tests. Some would do blood tests only. Some would do blood tests and a urine test. Other doctors would do all the tests. We would like to give you some choices on how to approach this.

Please understand that all of these tests are safe.

Appendix B - Tests and Treatment Selection Sheet

Doing all these tests is the safest approach. On the other hand, we don't want to do any unnecessary tests.

The doctor
recommends:

If you would like us to do more tests or less tests than the doctor recommends, please tell us and we can discuss this.

Do you want us to do these tests ?
❑ I don't want to choose, I want the doctor's recommendation.
❑ Yes ❑ No Blood tests - checking for bacteria in the bloodstream
❑ Yes ❑ No Urine test - checking for urine or kidney infection
❑ Yes ❑ No Spinal tap - checking for meningitis (brain infection)
❑ Yes ❑ No Chest X-ray - checking for pneumonia (lung infection)

Do you want us to treat your child with antibiotics ?
❑ No antibiotics
❑ Antibiotic shots (high dose) - treats some hidden infections, but not guaranteed to prevent worsening
❑ Antibiotics by mouth - might treat some hidden infections
❑ I don't want to choose. I want the doctor's Recommendation

Check one:
❑ I don't like helping the doctor decide the treatment for my child.
❑ I like helping the doctor decide the treatment for my child.

You are child's: ❑ Mother ❑ Father ❑ Other

How old are you? _____

I understand that doctors do not agree on which tests should be done for fever.
I understand that the doctor has offered me all of these choices.
I understand that no choice is guaranteed to be perfect.



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Please see references and prescribing information on adjacent page.

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INDICATIONS AND USAGE
BENZAMYCIN® Topical Gel is indicated for the topical treatment of acne vulgaris.

CONTRAINDICATIDNS
BENZAMYCIN® Topical Gel is contraindicated in those individuals who have shown hypersensitivity to any of its components.

WARNINGS
Pseudomembranous colitis has been reported with nearly all antibacterial agents, including erythromycin, and may range in severity from mild to life-threatening. Therefore, it is important to consider this diagnosis in patients who present with diarrhea subsequent to the administration of antibacterial agents.
Treatment with antibacterial agents alters the normal flora of the colon and may permit overgrowth ot clostridia. Studies indicate that a toxin produced by Clostridium difficile is one primary cause of "antibiotic-associated colitis."
After the diagnosis ot pseudomembranous colitis has been established, therapeutic measures should be initiated. Mild cases of pseudomembranous colitis usually respond to drug discontinuation alone. In moderate to severe cases, consideration should be given to management with fluids and electrolytes, protein supplementation and treatment with an antibacterial drug clinically effective against C. difficile colitis.

PRECAUTIDNS
General: For topical use only; not for ophthalmic use. Concomitant topical acne therapy should be used with caution because a possible cumulative irritancy effect may occur, especially with the use of peeling, desquamating or abrasive agents. If severe irritation develops, discontinue use and institute appropriate therapy.
The use of antibiotic agents may be associated with the overgrowth of nonsusceptible organisms including tungi. If this occurs, discontinue use and take appropriate measures.
Avoid contact with eyes and all mucous membranes.
Information for Patients: Patients using BENZAMYCIN® Topical Gel should receive the following information and instructions:
1. This medication is to be used as directed by the physician. It is for external use only. Avoid contact with the eyes, nose, mouth, and all mucous membranes.
2. This medication should not be used for any disorder other than that for which it was prescribed.
3. Patients should not use any other topical acne preparation unless otherwise directed by physician.
4. Patients should report to their physician any signs of local adverse reactions.
5. BENZAMYCIN® Topical Gel may bleach hair or colored tabric.
6. Keep product refrigerated and discard after 3 months.

CARCINOGENESIS, MUTAGENESIS AND IMPAIRMENT OF FERTILITY
Data trom a study using mice known to be highly susceptible to cancer suggests that benzoyl peroxide acts as a tumor promoter. The clinical significance of this is unknown.
No animal studies have been performed to evaluate the carcinogenic and mutagenic potential or effects on fertility of topical erythromycin. However, long-term (2-year) oral studies in rats with erythromycin ethylsuccinate and erythromycin base did not provide evidence of tumorigenicity. There was no apparent effect on male or female fertility in rats fed erythromycin (base) at levels up to 0.25% of diet.
Pregnancy: Teratogenic Effects: Pregnancy CATEGDRY C: Animal reproduction studies have not been conducted with BENZAMYCIN® Topical Gel or benzoyl peroxide.
There was no evidence of teratogenicity or any other adverse effect on reproduction in female rats fed erythromycin base (up to 0.25% diet) prior to and during mating, during gestation and through weaning of two successive litters.
There are no well-controlled trials in pregnant women with BENZAMYCIN® Topical Gel. It also is not known whether BENZAMYCIN® Topical Gel can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. BENZAMYCIN® Topical Gel should be given to a pregnant woman only if clearly needed.

Nursing Women: It is nof known whether BENZAMYCIN® Topical Gel is excreted in human milk after topical application. However, erythromycin is excreted in human milk following oral and parenteral erythromycin administration. Therefore, caution should be exercised when erythromycin is administered to a nursing woman.

Pediatric Use: Safety and effectiveness ot this product in pediatric patients below the age ot 12 have not been established.

AOVERSE REACTIONS
In controlled clinical trials, the total incidence of adverse reactions associated with the use of BENZAMYCIN® Topical Gel was approximately 3%. These were dryness and urticarial reaction.
The following additional local adverse reactions have been reported occasionally: irritation of the skin including peeling, itching, burning sensation, erythema, inflammation of the tace, eyes and nose, and irritation of the eyes. Skin discoloration, oiliness and tenderness of the skin have also been reported.

OOSAGE AND ADMINISTRATION
BENZAMYCIN® TopMical Gel should be applied twice daily, morning and evening, or as directed by a physician, to affected areas after the skin is thoroughly washed, rinsed with warm water and gently patted dry.

Important to the Pharmacist
Prior to dispensing, tap vial until powder flows freely. Add indicated amount of ethyl alcohol (70%) to vial (to the mark) and immediately shake to completely dissolve erythromycin. Add this solution to gel and stir until homogeneous in appearance (1 to 1½ minutes). BENZAMYCIN® Topical Gel should then be stored under refrigeration. Do not freeze. Place a 3-month expiration date on the label.

NOTE: ***Prior to reconstitution, store at room temperature between 15° and 30°C (59° – 86°F).***
After reconstitution, **store under retrigeration between 2° and 8°C (36° – 46°F).**
Do not freeze. Keep tightly closed. Keep out of the reach of children.

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child's temperature decreased. Parents were informed that such a favorable temperature response to antipyretics does not rule out the possibility of serious infection.[35-41] Similarly, a clinical observation scale was not found to be useful in detecting bacteremia.[42] Despite these limitations, documentation of the child's vital signs and general appearance at discharge, if all favorable, are added evidence to support a benign clinical assessment. It is common for an hour to elapse following an admission dose of antipyretics because of patient registration, physician availability, review of the necessary information, family discussion, charting, discharge instructions, etc. Even in cases where antipyretics were given late in the E.D. visit, or the duration of the E.D. visit was briefer than usual, all parents were willing to stay in the E.D. for up to 45 minutes for a period of observation and follow-up vital signs and clinical assessments.

not convincing that otitis media is the source of a high fever[28,29] and bacteremia risk is not altered by the presence of otitis media.[30] Additionally, otitis media is poorly defined and it ranges from minimal to severe without an objective standardized severity scale.[26,27] Otitis media results in fever in roughly 50% of cases.[28,29] Febrile children with otitis media often have a concurrent viral infection[28,29] (and occasionally bacteremia[30]) which may be the actual cause of the fever rather than the otitis media itself. Because otitis media cannot be reliably considered to be the source of a fever, these children should be considered at similar risk for bacteremia.

Anecdotally, parents seemed to feel some relief when their

Parents were informed that "expert" recommendations vary. This listing in table 1 is not meant to be complete, but rather to illustrate the spectrum of recommendations (for a more complete reference list, refer to Singer, et al[19]). Note that most of these reports are not publishing recommendations based on newly acquired data, but rather rely on data collected in the past. The two recent studies of children (Bass[12] and Fleisher[14]) both focused on comparing oral antibiotics with parenteral antibiotics. Given the widespread use of

H. influenzae B vaccine in infants, it is likely that the most virulent of the common bacteremial organisms is likely to be less prevalent if a study of bacteremia were to be repeated today. Thus, the conclusions reached by even the most recent of studies available to us may only have limited applicability to the contemporary cohort of children. The likelihood of a bad outcome is likely to be lower currently, than it has been in the past.[18]

Although empiric antibiotics are often administered without obtaining a blood culture, this choice receives negative reviews from most experts, because it does not permit clinicians to identify patients with bacteremia.[8,18] It may also mask other existing infections such as meningitis and urinary tract infections. The magnitude of this potential problem is difficult to measure. In discussions with parents, this issue does not appear to concern them as much as other issues. In fact, the most frequent diagnostic/therapeutic choice was that of no tests with oral antibiotics (most of these cases had otitis media). It should be noted that:

1. The practice of administering a 10-day course of oral antibiotics without a blood culture is done very frequently in offices and emergency departments in the routine treatment of fever associated with otitis media. The frequency of bacteremia and its complications in children with otitis media is argued to be roughly similar to that of similar children without otitis media.[14, 30] The number of these febrile children who are not cultured probably greatly outnumbers patients in the E.D. identified as at risk for occult bacteremia. Yet there has been no substantial published concern recommending blood and/or urine cultures for febrile children prior to antibiotic treatment for otitis media.

2. Despite obtaining a blood culture, the decision of whether to hospitalize a patient with pneumococcal bacteremia is based on the patient's clinical status (persistent fever vs. afebrile and well-appearing) at the time of the positive blood culture (1 to 3 days later) and not solely on the blood culture (unless it is positive for a more virulent organism).[8,9] Thus, regardless of the blood culture results (positive, negative, or not obtained) and regardless of whether a patient is on antibiotics at the time of follow-up, patients who are not doing well, should be investigated and treated more aggressively.[8,9]

This small survey of patients and parents described in this report demonstrates that most parents are willing to digest substantial amounts of medical information in a reasonably short period of time. The degree to which they understand this information was not measured in this survey. In the typical patient encounter, comprehension cannot always be objectively and accurately assessed. Clinicians must generally rely on communication skills and feedback from the patient/parents to assess comprehension. In this survey, once parents received the information, nearly everyone was willing to express a preference and in most instances, their preference was not in favor of performing tests. Nearly everyone preferred to participate in the medical decision making involving their child. While this process was extremely time-consuming for the clinician and possible only during periods of low E.D. census, most parents seemed to appreciate the information and time spent.

Since the diagnostic and therapeutic decisions involved in the febrile child at risk for occult bacteremia are controversial, it is difficult to say with certainty that any given approach is scientifically superior to all other approaches. Despite the lack of scientific certainty, practice guidelines have been published.[8,9] Practicing pediatricians do not appear to consistently follow these guidelines[23,24] and thus, the controversy has not ended.[43-45] While physicians may often feel the need to obtain a blood culture and administer ceftriaxone to febrile children who do not appear ill, would they take this same approach for their own son or daughter? One study indicates that they would not follow the practice guidelines for their own child.[46] Regardless, this choice, which is available to physicians, may not be offered to other patients if the practice guideline recommendations are imposed upon patients without disclosure of alternatives. Informed consent contemplates that patients should collaborate with physicians in developing and evaluating treatment options, with patients having a veto over any proposed treatment.[2]

Similarly in this report, parents were given information on the issue of febrile children (without a source). Informed consent should disclose to patients all information "material" to making a decision whether to undergo or forgo a proposed treatment or diagnostic procedure.[1,2] This would include the disclosure of risks, benefits, and alternatives.[1,2]

Medical legal liability concerns with informed consent raise additional controversy.[6] Are parents capable of making informed consent decisions? Will physicians be held liable if physicians comply with parents' preferences? Does involving the parents in the decision making process result in more liability risk or less liability risk?

The above questions are difficult to answer and these issues are beyond the scope of this report. However, if the choice is to disclose or withhold information about alternative approaches (discussion of the range of diagnostic and therapeutic strategies), the doctrine of informed consent states that we must not withhold the information, regardless of what one's opinion of the medical legal liability consequences is.[2] While this may be ideal from an informed consent perspective, most practicing physicians find this to be extremely time consuming and often not possible in their practice.

A general principle of reducing malpractice risk is to disclose and acknowledge the presence of uncertainty with patients. While physicians prefer to form clear and accurate diagnoses and treatment plans for their patients, uncertainty exists.[47] It should be accepted by and acknowledged by the physician and the patient. Disclosing the issues of controversy acknowledges this uncertainty.[47] When uncertainty presents choices, people make decisions appropriate to a level of risk that they can tolerate. The "process model" of informed consent (where patient and physician interact in an ongoing relationship sharing information, clinical results, diagnostic/therapeutic choices/recommendations, and personal/cultural perferences[2]) provides an opportunity to establish a therapeutic alliance between physician, patient, and family[48] where the physician, patient, and family are all co-active in sharing responsibility[49] and hence, risk. Many health care risk managers agree that such a process might reduce malpractice risk.[48]

In this survey, patients weighed the potential harm and discomfort to their child from tests and treatments against the potential benefit of the same. Since the tests and treatments are largely harmless, the dominant negative factor remaining is pain sustained by their child. Thus, most parents did not perceive the benefits of blood culture to outweigh the pain consequence. The practice guidelines recommending blood work on all these patients[8,9] would suggest that the wisdom of experts should outweigh the wisdom of parents. The monetary cost of the tests was never considered by patients in this survey. Nearly all the patients were insured and their out of pocket

expenses for a CBC and blood culture would range from zero in most instances to up to 20% of the insurance carrier's pre-negotiated preferred laboratory rates. Thus, most parents declined the tests even if their out of pocket expenses were zero or a minimal cost.

These results are consistent with those found in a focus group of 33 parents choosing treatment options for a hypothetical 6-week old infant with fever, in which parents tended to choose options that involved less testing and more risk.[20] Another study demonstrated that parents and physicians differ in the way they value the benefits and consequences of the tests, treatments, and outcomes of children at risk of bacteremia.[50] Parents emphasize the short-term pain, discomfort, and inconvenience of the tests and are more willing to risk rare but severe long-term morbidity to avoid the short-term consequences of testing.[50] These factors account for the findings of our survey.

While physicians may find it less time consuming (and often preferable) to impose their diagnostic and therapeutic plans upon patients, informed consent requires that we spend more time with patients discussing significant alternatives. This report shows that this can be done even in a complex and controversial clinical decision making scenario such as this. This process, however, is very time consuming. A standardized information sheet reviewed by a nurse may be a more efficient way of insuring informed consent. This process would be similar to condition specific discharge information sheets that are reviewed with patients by nurses or physicians at discharge. Such condition specific information sheets can be composed for other conditions where decision making is complex and controversial to optimize and document the process of informed consent.

In summary, favorable points of informed consent are presented where risks, benefits, and alternatives are disclosed. From the data presented, we can conclude the following: 1) Parents overwhelmingly prefer to be included in the medical decisions affecting their child. 2) Under the circumstances of this study, most parents were not in favor of obtaining CBC's and/or blood cultures. 3) No conclusion can be drawn regarding the empiric antibiotic preferences of parents since antibiotics were recommended by the treating physician in most instances. 4) The process of informed consent is time consuming and often not possible when the E.D. is busy. Physicians may find it desirable to make decisions from an informed consent perspective to a comfort level dependent on time availability, parents' comprehension ability, and individual personal practice preference.

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Common Sports Injuries Seen by the Primary Care Physician Part I: Upper Extremity

James F. Scoggin, III, MD*

From a lecture presented at the 1996 Hawaii Medical Association Annual Meeting in Lihue, Kauai

Sports medicine is the care of medical and surgical needs of athletes. Common sports injuries of the upper extremity include traumatic and atraumatic dislocations and subluxations of the shoulder. Many traumatic dislocations in young athletic individuals will reoccur unless surgically corrected.

Rotator cuff problems commonly interfere with activities which require overhead motion. Injuries of the acromioclavicular joint are best categorized by their radiographic appearance.

Tennis elbow can usually be treated by a stepwise conservative approach. Skier's thumb is a sprain of the ulnar collateral ligament of the first metacarpophalangeal joint. The Stener lesion should be ruled out.

The ulnar nerve may be compressed in the palm of the hand in cyclists. This usually responds to decreasing mileage and increasing padding of the hands. Oarsman's wrist is a tenosynovitis of the wrist seen in paddlers.

Athletic, or sports injuries are primarily injuries of the musculoskeletal system. These may be seen and treated either in the office of the primary care physician, or of the specialist. Whether treating the elite world class athlete or the weekend warrior, the following principles of diagnosis and treatment generally apply. A thorough history and physical examination will usually make precise diagnosis of the injury possible. An anatomic approach follows.

Shoulder dislocations and subluxations in sports are quite common and have affected the careers of many athletes. Two important subgroups should be identified: 1) acute traumatic dislocations; and, 2) atraumatic subluxations.

Traumatic Shoulder Dislocation

The first group, acute traumatic shoulder dislocations, are approximately 98% anterior in direction.[1] There is usually a history of injury with an abduction and external rotation force applied to the shoulder. The physical examination of these patients should always include evaluation of the neurovascular status of the limb. The axillary nerve is the most common associated neurologic injury with acute traumatic shoulder dislocations. Evaluation of the axillary nerve should include testing of the autonomous sensory zone located on the lateral deltoid. Numbness in this area will suggest damage to the axillary nerve.[2]

X-ray evaluation of the acutely dislocated shoulder should include the "trauma series" of x-rays. The trauma series includes a true A.P. x-ray of the shoulder, an axillary or "West Point" view of the shoulder, and a true lateral view in the scapular plane. This series gives views of the shoulder at right angles to one another and, in general, should be performed whenever evaluating acute traumatic episodes of the glenohumeral joint.[3]

Most shoulder dislocations are acutely reduced in the emergency room and these patients are then followed as outpatients, often in the primary care physician's office. Outpatient follow up is extremely important because acute anterior shoulder dislocations have a 94% recurrence rate, if the patient is under 20 years of age. In patients over 40 years of age, there is a lower recurrence rate,[4] but a higher instance of rotator cuff tears associated with the traumatic episodes. The patient needs to be counseled regarding the likelihood of recurrence. In the older patient, rotator cuff tear must be suspected and ruled out by physical examination, or, if necessary, by further diagnostic testing.[5]

After an acute shoulder dislocation, it is common practice to treat the initial injury with a sling or shoulder immobilizer, ice, and analgesics as required. Gradual return to function occurs after approximately three weeks. The length of the immobilization required is controversial and probably does not influence the likelihood of reoccurrence.

Recurrent shoulder dislocation is an indication for referral to the orthopedic surgeon. Recurrent shoulder dislocations are a disabling and disconcerting condition in the life of an athlete or active person. They can be surgically repaired with a 96-97% success rate.[6,7]

Atraumatic Shoulder Subluxation

A second subgroup of shoulder instabilities is the atraumatic subluxation. These may be anterior, posterior, or inferior, and may also be multidirectional. The typical patient in this subgroup, however, presents to the office with a history of the shoulder slipping in and out of joint without an initial traumatic episode preceding it. Commonly, this is associated with chronic repetitive stretching injuries, such as occur in baseball pitchers, tennis players, and other overhead athletes. The patient often states that the shoulder slips in and out of joint or feels "dead", especially with a pitching or throwing motion.[8,9]

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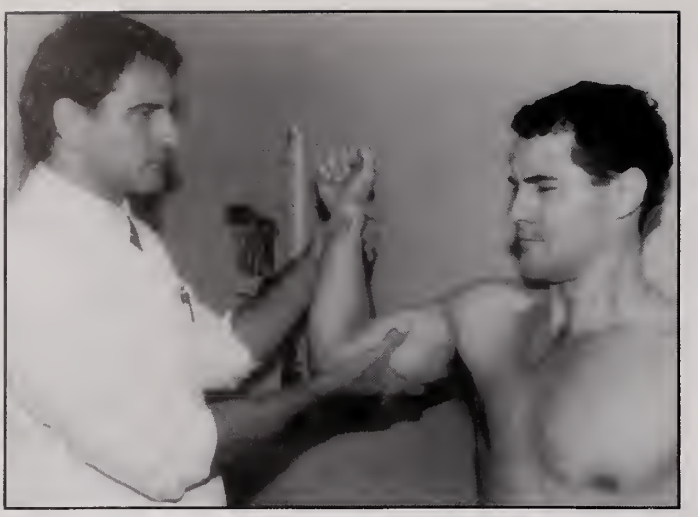


Figure 1.—To test for anterior shoulder instability, the patient's arm is abducted and externally rotated gently. The patient will display a look of apprehension as the shoulder nears a position of dislocation.



Figure 2.—Tennis elbow pain may be relieved by a tennis elbow splint or Nirschl band placed snugly about the forearm.

On physical examination, there is a positive apprehension sign (Figure 1). The patient indicates apprehension when the arm is abducted and externally rotated. Pain is often reproduced with a dislocation maneuver, and relieved by a reduction maneuver. One should always check for generalized ligamentous laxity, including a sulcus sign, hyperextension of the elbow joint, or the ability to touch the thumb to the wrist. In some athletes, the shoulder slips in and out of joint because the ligaments are so lax that they just do not hold the joints in place.

Radiographic evaluation, once again, should consist of the "trauma series." A pneumonic, "AMBRI," outlines the treatment of atraumatic subluxations. If the initiating event is Atraumatic, and especially if the direction of instability is Multidirectional; if the condition is Bilateral, then the treatment is Rehabilitation with dynamic stabilization of the shoulder in physical therapy. An Inferior capsular shift may be necessary if surgery is performed.[3]

Rotator Cuff Injuries

The next group of shoulder injuries which we will discuss includes acute and chronic injuries to the rotator cuff. This broad area includes acute strains or tears of the rotator cuff, and chronic repetitive attrition of the rotator cuff associated with impingement. The rotator cuff is composed of the tendons of the supraspinatus, infraspinatus, subscapularis, and teres minor. These tendons coalesce at their insertion on the greater tuberosity of the humerus. During abduction of the shoulder, the supraspinatus is exposed to friction against the undersurface of the acromion. Sudden pain, or chronic pain with throwing, paddling, tennis serve, bench press, or other shoulder activity, may indicate a strain or tear of the rotator cuff. The diagnosis of this disorder continues with the physical examination. There is often a painful arc of motion between 70 degrees of abduction and 120 degrees of abduction. There may be a positive impingement sign. The impingement sign is elicited by having the patient abduct his shoulder 90 degrees, while the examiner gently internally rotates the arm. In the presence of a rotator cuff tear or other rotator cuff injury, this usually will reproduce pain which the patient can pin point at the top of the shoulder, or rotator cuff region. There is often weakness or pain with abduction of the shoulder or with forward flexion against resistance. In an acute rotator cuff tear, there is often a positive "drop arm test". In this test, the physician elevates the patient's arm passively. If he then begins to remove his support from the patient's arm, the patient reports the sensation that his arm will "drop".[10,3]

Plain film x-rays, the trauma series, are again indicated in most cases. The treatment for acute shoulder strains is rest, ice, analgesics as needed and gradual return to function as pain subsides. In the face of an acute full thickness rotator cuff tear, surgical repair is indicated in most young athletic individuals. Conservative management of the full thickness rotator cuff tear might be considered in debilitated, elderly, or otherwise low activity patients, or if the patient is a poor surgical candidate.

Rotator cuff problems do not always present with an acute injury as those described above. There is often a history of chronic pain with certain activities, such as throwing, swimming, weight lifting, etc. The physical examination should include evaluation of strength and range of motion of the shoulder, with testing for an impingement sign and instability. If the pain or weakness is severe, an arthrogram or MRI might be considered to rule out rotator cuff tear. If the pain is milder, or if a rotator cuff tear is not suspected, nonsteroidal anti-inflammatory drugs and a shoulder rehabilitation program to emphasize internal and external rotation strengthening should be performed. If no relief is obtained, a subacromial cortisone injection should be considered. Obviously, rest from aggravating activities or modification of the activity itself, should be addressed. If the pain cannot be resolved with conservative management, arthroscopic examination is considered. In most cases, with chronic impingement, six months of conservative management and modification of activities will precede consideration of arthroscopic evaluation, unless suspicion of a torn rotator cuff or damage to other significant shoulder structures is strongly suspected. The arthroscope has proven extremely valuable in evaluation of the shoulder and in treatment of certain rotator cuff lesions. Diagnostically, the arthroscope can be used to evaluate the rotator cuff and confirm or exclude the presence of partial or full thickness rotator cuff tears.

The condition of the biceps tendon and other potentially involved structures can be evaluated. Furthermore, the arthroscope can be used in conjunction with specialized instruments to decompress the undersurface of the acromion where bony structures may be impinging on the rotator cuff.[11,12] Arthroscopically assisted rotator cuff repair methods are available.

Acromioclavicular Joint Separation

Acromioclavicular joint separation, also known as shoulder separation, commonly occurs as a result of athletic injury. The athlete may present with pain and swelling at the end of the collar bone. These injuries often occur with a direct force to the point of the shoulder, such as a tackle or fall resulting in a direct impact between the shoulder and the ground. This force is directed from the point of the shoulder to the AC joint, causing the ligaments to tear in a variable pattern with the end of the clavicle popping out of place. These injuries are graded from I-VI, depending upon their severity.[5] For the most part, the grading of these injuries is based on their radiographic appearance. The type I AC joint separation is a mild sprain of the joint. It is treated with a sling and rest for one to two weeks or until the tenderness resolves. The type II AC joint separation is a slight elevation of the clavicle seen on x-ray. These are commonly treated with a sling and rest for three to six weeks, followed by progressive strengthening. Often the athlete will need to wait eight to twelve weeks for return to contact sports.[10] The type III shoulder separation represents a more significant injury. In type III separation, the distal clavicle is elevated completely above the superior border of the acromion. The type IV AC joint separation presents with the end of the clavicle impaled through the trapezius. the type V shoulder separation is one in which a severe dislocation of the joint leaves the end of the clavicle elevated, almost to the base of the neck, and the type VI AC joint separation is an inferior dislocation of the distal end of the clavicle to a subcoracoid position. In general, the type I and II AC joint separations are always treated conservatively with a sling and rest for a few weeks, depending on the severity of the injury, followed by progressive strengthening and gradual return to sports. The treatment of the grade IV through VI injuries is always surgical, for these represent severe disruption of the normal anatomy. The treatment of the grade III separation is somewhat controversial, although more physicians are leaning towards the conservative management of these injuries. This, however, should be individualized, depending upon the specific characteristics of the injury and the demands or requirements of the patient. The above described evaluation of the AC joint is very dependent upon obtaining high quality x-rays. X-ray evaluation of the AC joint requires less x-ray penetration than x-ray evaluation of the shoulder joint itself. Specific radiographic evaluation of the acromioclavicular joint is required.[3,5]

Tennis Elbow

Tennis elbow is a term that is usually synonymous with lateral epicondylitis. Occasionally, the term tennis elbow may be used to describe pain of the medial epicondyle of the humerus. This latter condition is also known as golfer's elbow. The patient with tennis elbow usually complains of pain at the lateral epicondyle of the humerus which may radiate proximally or distally. In tennis, the pain is often associated with the backhand stroke.[13,14]

Physical examination

The athlete will complain of pain with resisted extension of the wrist. The pain should localize to the epicondyle region, and should reproduce the patient's symptoms.

Treatment

The initial treatment of tennis elbow should include stopping or modifying the offending activity. Abstaining from, or at least reducing the amount of tennis may be helpful. In milder cases, simply adjusting the tennis stroke and correcting training errors may be helpful. In tennis this is especially important in the backhand stroke. The player should be instructed in using less wrist extension in his stroke, or switching to a racquet that is not as stiff. Nonsteroidal anti-inflammatory drugs are often utilized initially. Counterforce bracing, utilizing a tennis elbow splint or "Nirschl" band (Figure 2), is inexpensive and protects the origin of the extensor tendons at the lateral epicondyle during healing.

If the above measures do not result in improvement, one might consider a cortisone injection, further rest from the offending activities, or possibly a course of formal physical therapy. Eighty to ninety percent of appropriately treated tennis elbow cases should resolve within six months with conservative measures alone.

Surgical treatment is indicated in those cases of tennis elbow which do not respond to six months of appropriate conservative management.[15]

Skier's Thumb

"Skier's thumb," or "gamekeeper's thumb," is a sprain of the ulnar collateral ligament at the base of the thumb metacarpophalangeal joint. This is considered to be the most common skiing injury, and may occur with forced abduction of the thumb associated with a fall while holding the ski pole. Milder sprains are usually treated with splinting or protective taping. It is important to distinguish between a partial and a complete rupture of the medial collateral ligament. In certain more severe sprains, the tendon may become interposed between the proximal and distal ends of the torn medial collateral ligament. This is the so-called "Stener lesion." In these cases, surgical repair is often needed to restore pinch strength and prevent chronic instability and pain of the joint.[10,16]

Ulnar Nerve Compression In Cyclists

Cyclists may develop numbness in the ulnar nerve innervated digits from chronic compression of their ulnar nerve in the palm of the hand which occurs while riding. In addition to numbness, intrinsic muscle weakness of the hand may also occur. Treatment should include thickly padded handlebar cushions or tape, padded cycling gloves, and restricting mileage.

Oarsman's Wrist

Oarsman's wrist is an extensor tenosynovitis of the radial wrist extensors seen primarily in rowers and paddlers, and sometimes in racquet sports. Pain, tenderness, and swelling may be present at the dorsal wrist. the treatment is rest, splinting, and nonsteroidal anti-inflammatory drugs. Occasionally a steroid injection might be considered. Correction of training errors, with adequate rest periods and more gradual building of strength and endurance are helpful in prevention.[10]

This series on common sports injuries for the primary care physician will be continued with part II, Lower Extremity, in a subsequent issue.

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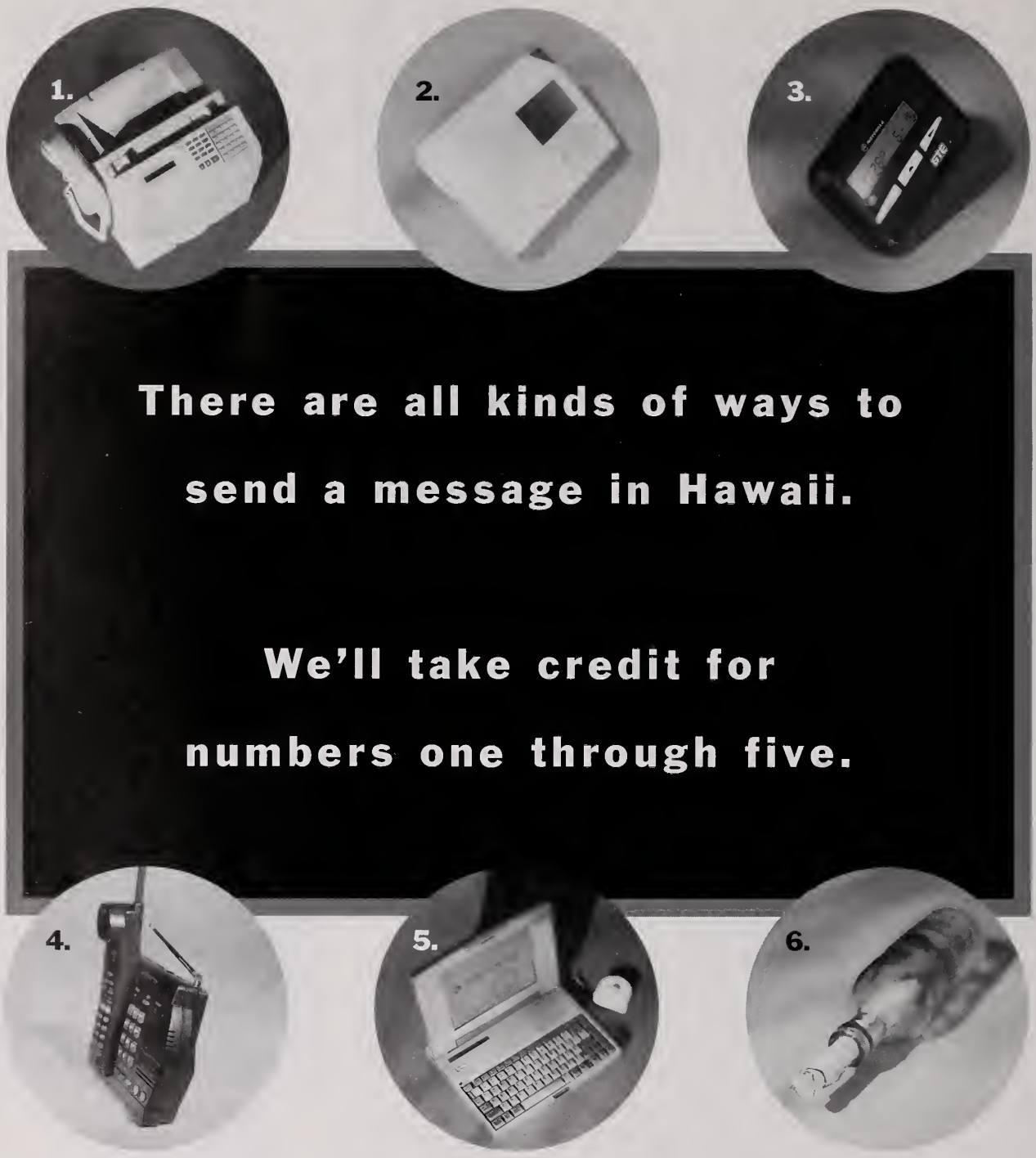
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News and Notes Henry N. Yokoyama MD

Life in These Parts

A Prayer for Tom Frissell

God of all mankind, Creator of the Universe
We thank you for this day in Hawaii-nei.
We thank you for this occasion: a celebration
Of Tom's life, for having known Tom as a friend.
A cantankerous friend, a kind and generous friend.
 This was the noblest fisherman of them all
 This was a giant of a man
 This was an Ahi among Menpachi
Tom is now for the ages. No one quite like him
Will walk the face of the earth or sail the
Seven seas, FOREVER MORE.
Best his memory will linger with us
 With a smile on our lips
 With a twinkle in our eyes
 With a twinge in our hearts.
We rejoice that he is in the company of Capt. Bill,
Pres, Mr Mahi, Mr Ahi, Mr Uhu, Mr Paka
 May the wine there be vintage and everflowing
 May the sashimi be fresh and plentiful
 May the chops be thick and tasty.
Help us remember that he was your gift to us.
Help us keep his memory precious as we return
His ashes to you, remembering that we,
In the not too distant future,
Will be joining Tom in your Happy Fishing
 Grounds.
This we pray.

Theodore K.L. Tseu MD
(Tom's fishing buddy)
Aboard the Kuu Huapala
off Kalaupapa, Molokai
July 8, 1997

The Duchess

(Condensed version from Stitches July-August 1997)

The subject of the day was "Limericks" at a nursing home activities session. A very quiet withdrawn lady resident who rarely spoke a word, put up her hand and began to recite:

"I sat with the duchess at tea;
She was gracious as gracious could be,
But her rumblings abdominal
Were something phenomenal,
And everyone thought it was me!"

The Nervous Mountie

(A very condensed version of a Stitches story by Robbie Newton Drummond MD)

Daniel Dumas was the true general surgeon who could and did everything. He knew gynecology and urology and plastics. He could drill burr holes and anastamose the ends of resected bowels. Daniel had been in every major conflict in WWII. He'd trained in France, and alas although his grammar was unimpeachable, his accent was an atrocious blend of Hercule Poirot and Inspector Clouseau.

A frightened, burly 6 ft. 3" Royal Canadian Mountie needed a vasectomy. The procedure went smoothly and painlessly and Daniel used cat gut to close the final layer. In a benighted effort to placate the patient, he leaned over the drape with his masked face and said matter of factly, "Zee nuts fall off in ten days."

The patient bolted upright, the whites of his horrified eyes filled my field of vision. I grabbed his shoulders, locked my gaze with his and translated: "The knots, the knots will fall off in ten days."

Anecdotes

A young man from the outback decides to get some learning in Sydney. He meets a hooker in a bar and they go up to a hotel room. He starts to run around in the room. First he grabs the dresser and throws it out the window. A few minutes later, he picks up the bed and throws it out the balcony. The hooker asks in astonishment: "What's happening?" The young man replies, "Never been with a woman before. If it's anything like being with a kangaroo, we need lots of room."
(As told by Jon Isenberg, Professor of Medicine, UC San Diego lecturing at the 7th Annual Hawaii Gastroenterology Symposium at Kahala Mandarin on Sat. Aug. 23. Jon explained that he needs "lots of room" to discuss NSAIDS and Helicobacter Ulcers)

Uncle Dick noticed that everytime he ate chitlins, his favorite food, his foot would pain him that evening. The family doctor confirmed his suspicion that it was pork-induced gout. When he returned from the doctor's, my aunt asked him how the appointment had gone. Uncle Dick plopped down on the sofa, kicked off his shoes and replied, "the doctor said I'm going to have gout about three times a week." *(Reader's Digest September 1997)*

The Latest News on Gerd

(Keith Tolman MD; Chief of Endoscopy at University of Utah; Dinner lecture at Pacific Cafe Oahu, August 7)

Rules in Medicine
1. Above all, do no harm
2. Cover your ass

Re Behavioral Modification

"The only reason I would take up jogging again; so that I can hear heavy breathing again."
Erma Bombeck

Re Sucralfate

Two questions you never ask at a meeting
1. How does sucralfate work?
2. What are the ingredients in German sausage?

Esophagitis Therapy

"Step up approach is a product of marketing. It's biologic nonsense. The proton pump inhibitors are better for all grades of esophagitis. We can heal esophagitis, but the relapse rate is 70%. Reflux is a chronic disease. Continuous treatment is necessary.

Zsa Zsa's 6th husband:
"I know what to do, but I don't know how to make it exciting."

Re Proton Pump Inhibitor

Give it in the morning 1/2hr before breakfast.

GERD

It is a lifetime disease requiring lifetime medication. 79% of patients improve on therapy. Surgery is not curative. We need to reevaluate the role of surgery in GERD: viz Laproscopic fundoplication vs proton pump inhibitor.

The Last Rule of Medicine

"Never ask a surgeon if you need an operation."
Likewise: "Never ask a gastroenterologist if you need endoscopy."
Step-down therapy is also a marketing strategy. Maintenance therapy for GERD is full dose daily therapy.

Goals of Maintenance Therapy for GERD
- Improve quality of life
- Prevent complications
- Safety
- Cost effectiveness

"The best therapy is the therapy that works."
"The most expensive therapy is therapy that doesn't work."
Yogi Berra said, "Predictions are always dangerous, especially about the future."

Miscellany

Paddy had just arrived in New York from Ireland and was invited by one of his American cousins to go to his first baseball game. Seated in the Yankee Stadium bleachers, he watched as a man swung a stick, hit a ball and started toward a white bag. Everyone stood up and yelled, "Run, run!"

Then a second guy came up to the plate, whacked the ball and started down toward the white bag. Everyone stood again and yelled, "Run, run!"

A third batter came up, but this one didn't hit the ball. He didn't even swing. Four times the pitcher pitched, four times the catcher caught. Paddy was completely confused when the batter dropped the stick and started strolling toward the white bag. "Run, run!" Paddy shouted.

"No, he doesn't have to run," his cousin informed him. "He's got four balls." Paddy's eyes widened as he stood. "Walk with pride, man!" he shouted. "Walk with pride!"
(From Playboy April 1997)

Chemists synthesize marvelous chemicals these days. There is the story that one synthesized an aphrodisiac for men that is so powerful that it had to be swallowed very quickly to avoid a stiff neck.

Continued on Next Page

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Joe Camel Sent Packing

The AMA was pleased that RJ Reynolds is dropping the cartoon character, but it maintains, "It gives us no reason to believe that his creators have quit. Let's hope this is a step in the right direction rather than the beginning of a new and equally sinister campaign to addict our young people to deadly tobacco."

The French Paradox

Genial nephrologist ***Eugene Wong*** who was honorary chairman (for the 4th time) of the 8th Annual Honolulu Wine Festival (A benefit of the Hawaii Lupus Foundation) says: "The only paradox between wine and health is the "French Paradox." Despite their rich, high fat diet, the French have a low rate of heart disease. They drink a lot of red wine which is rich in flavanoids and falvanoids are antioxidants preventing LDL from exercising its bad effects. The flavanoids are primarily found in the skin of grapes and red grapes have more than white grapes."

"One of my philosophies is to experience the most out of my life. And there is always something new to learn about food and wine. Anyone who thinks he is an expert in food and wine is a jerk. There is so much to learn, and that's what makes it great."

"The best thing about wine is that it's an area where you can share with other people. I'm a people person and sharing my knowledge about food and win through combined fellowship is what it's all about."

In 1994, Eugene was named "Mr Gourmet of the Year" by the Society of Bacchus America, an elite New Orleans wine and food club.

Health Briefs

(Pacific Business News, Oct. 6, 1997)

The Physician Compensation and Production Survey 1997 Report by Medical Group Management Association summarizes the incomes of 30,000 physicians as follows:

During the period 1992 to 1996: Primary physicians' income rose 17%, Specialists' income rose 5.5%.

Four specialities, ophthalmology, neurology, anesthesiology and pulmonary medicine reported a 2% income loss and work increase of 18%.

Appointed, Elected & Honored

The 1997 United Chinese Society elected ***David Lee Pang***, 86, Father of the Year.

Osamu Fukuyama, cardiologist and Associated Clinical professor of Medicine at the UH School of Medicine was elected KMC's 1997 Physician of the Year.

Classified Notices

To place a classified notice:

HMA members.—Please send a signed and typewritten ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in HMJ as space is available.

Nonmembers.—Please call 536-7702 for a nonmember form. Rates are $1.50 a word with a minimum of 20 words or $30. Not commissionable. Payment must accompany written order.

Office Space

Liliha Medical Bldg.—Share a 1,397 sq. ft. medical office with free visitor parking. Call Chaney, Brooks & Company. 544-9557.

Surgeon looking to share an office.—in the Queen's POB I or II. Fax information to 951-5538.

Locum Tenens

Locum Tenens available.—Board-certified family practice, 14 yrs clinical experience in Hawaii. Office coverage, Deborah C. Love MD; home Oahu: (808) 637-8611; cell ph: (808) 295-2770.

Take an Afternoon Off.—While your office stays open. Part-time primary care office coverage on a regular or occasional basis by longtime Honolulu physician. Contact John Wichmann-Walczak MD at 739-9483 or 524-2575.

Wanted: Locum Tenens position.—Board-certified family practitioner with considerable experience in locum tenens work. Desires position for 1, 2 or many weeks. Call Kit Glover 668-7337 or the Phy Ex 524-2575.

Business Opportunity

Veteran Certified Petroleum Geologist.—Wishes to team up with oil and gas investment capital finder. Excellent remuneration. (614) 453-9231 or fax (614) 450-7507.

Announcement

General Practice Opened.—In Kapahulu area by 20-year veteran of St. Francis ER. New patients welcomed; free parking; convenient hours; house calls (downtown Honolulu-Aina Haian). John Wichmann-Walczak MD at 750 Palani Avenue, Honolulu 96816. 739-9483.

Relocation.—for Jennifer Frank MD, Family Practice and Tyronne Dang MD, Internal Medicine. Effective Oct. 13, 1997. Their new office is Artesian Plaza, 1907 S. Beretania St, 5th flr, Honolulu, HI 96826.

Misc.

Latex Glove Relief.—Latex glove sensitivity protectant spray, immediate reduction of Type I irritation from latex gloves, duration 100+ hand washes/4/8/16 hrs. Free evaluation sample to USA/APO address physicians. **Limited time, 1 sample per office.** Other products: Scalp Itch Reducer gel and Skin Itch Reducer gel, soothing relief, duration varies from 8-48 hrs, results vary per individual, Sahara Cosmetics, (808) 735-8081, PO Box 10869, Honolulu, Hawaii 96816-0869, USA, leave name on answering machine or send letterhead or business card to above address.

Opoid Analgesics.—Appropriate use vs Abuse seminar coming to Maui Waikapu Country Club on Tuesday, Nov.18 at 5 pm and to Kauai Marriott on Nov. 20 also starting at 5 pm. This outstanding seminar, with 3 speakers from the mainland, was a big hit on Oahu and the Big Island. Watch for special mailing. Mark your calendar now. This seminar will be made possible by an educational grant from Knoll Pharmaceutical Co. Invited to attend are physicians, nurses, pharmacists and dentists.

For Sale

Misc for Sale.—Desk 60" x 30" $50.; Credenza 71" x 18" $100, Xerox Model 5309, 1 yr old , $525. Ask for Nelson 536-7702.

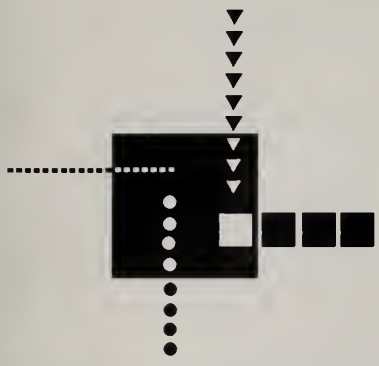
Give-A-Way.—Burroughs Pegboard accounting system. Call Jean Frissell 536-0779.

Wanted

HMA employees.—Looking for a good physician's-type scale for monitoring our weight. If you have one you'd like to donate, please call or birng to HMA office. Mahalo!

Two professionals seeking.—3/4 bedroom, 2 bath house to rent. Prefer peaceful setting. Dependable, no pets, no children. Call 737-4217 (bus ph).

Your Success is Our Goal



American Medical Association Organized Medical Staff Section (AMA-OMSS)* Assembly Meeting

December 4-8, 1997
Wyndham Anatole Hotel
Dallas, Texas

To succeed in today's health care environment, your medical staff needs the latest information and appropriate skills for meeting the day-to-day challenges of medical practice. By attending this meeting, you can learn about:

- **Joint Commission's ORYX initiative**
- **CPT coding changes and self audits**
- **Measuring and managing outcomes**
- **Group dynamics and team building**
- **Fraud and abuse compliance**
- **Advocating your issues at home**
- **New legislation and AMA action**
- **Medical staff reengineering and bylaws**
- **Forming a physician organization**
- **Patient involvement in medical decision-making**

In addition to these educational offerings, as an AMA-OMSS representative of your medical staff, you can participate in advocacy, policy-making and networking activities. **Our goal is to work with you to identify and address medicine's most pressing issues. We also want to help you increase your knowledge and skill so that together we can best serve the needs of patients, physicians, and the profession.**

To achieve this goal you can:

- Submit resolutions and participate in mode-of-practice and general interest forums to bring your concerns to the forefront.
- Testify at reference committee hearings and vote on actions in a democratic assembly to further AMA's advocacy agenda.
- Attend practical education programs to improve your medical practice, earn **10.5** hours of CME credit** and pay no fee to register!

Your success depends on your involvement! Plan today to attend the 1997 Interim AMA-OMSS Assembly Meeting on December 4-8, 1997, at the Wyndham Anatole Hotel in Dallas, Texas. To receive more information and registration materials, please call **800 621-8335 and ask for the Department of Organized Medical Staff Services.**

* The American Medical Association Organized Medical Staff Section (AMA-OMSS) leads and assists grassroots physicians, individually and in groups, to organize and reclaim their role as medical leaders and advocates for excellence in patient care, professionalism, and the integrity of the patient-physician relationship. We provide practical educational forums, focused policy development, and grassroots support through the Federation.

** The AMA designates this education activity for a maximum of 10.5 hours in category 1 credit towards the AMA Physician's Recognition Award. Each physician should claim only those hours of credit that he/she actually spent in the educational activity.

American Medical Association
Physicians dedicated to the health of America

The Weathervane

Russell T. Stodd MD

No matter how cynical you get, it is impossible to keep up.

The Optima Health Plan, an HMO in Virginia with 242,000 members, has begun fining capitated doctors $100/day when the doctor keeps the patient in the hospital too long. Nurses from the HMO visit the hospitals and determine for the plan what is the appropriate length of stay. If the nurse also decides the hospital was in some way responsible for the overstay, the carrier will refuse to pay the hospital. Not surprisingly, many of the 13,000 physicians are angry, because they believe they are providing appropriate hospitalization. However, physicians must recognize the doctor's vulnerability when he sells his volition to the corporation. The unspoken managed care motto is "profits, not patients."

Progress is an illusion.

In today's high tech tools of computerized imaging, the barrage of lab studies and the laptop, the practice of laying on the hands (and the other senses), is disappearing. In a recent report in JAMA, both students and residents failed to recognize and understand heart sounds of valve disease. 453 physicians in training and 88 medical students were in the study. In evaluating 12 detectable important abnormal heart sounds, the average grade was 20%. As the professor at Allegheny University of Health Sciences in Philadelphia noted, "The stethoscope is an accurate, sensitive and specific way of making a bedside diagnosis, but that skill is fading in our times of high technology." The critical point is that the increasing use of primary care physicians as "gatekeepers" (I hate that word), shifts more responsibility for diagnostic acumen to the general physician or internist. One more caveat to consider in shopping for medical plan.

It is the ability to deceive oneself that one shows the greatest talent.

A woman underwent a breast implant procedure. Subsequently, she sought to bring a malpractice complaint against the surgeon. Her attorney obtained a physician expert to provide testimony on her behalf. The "expert" submitted an affidavit of credentials, but the court determined that the physician had not been in active practice for ten years. Moreover, it was found that his recent professional activity consisted solely of providing testimony in cases such as this one. The affidavit was struck, and the expert not accepted by the court. Since the statute of limitations had run out, the malpractice action was dismissed. We really do have whores in our midst, and it is so refreshing when the court applies the label.

Our ability to delude ourselves is an important survival tool

Medical records and peer review actions are not discoverable, that is, they are confidential, right? Well, yes, or are they? A patient had a craniotomy and developed an infection three weeks after the procedure. The patient and his wife learned that there might have been a break in sterile technique during the operation, and that there had been four other similar cases, resulting in both hospital and state investigations. The patient got a copy of the government agency report and used some of that information in his complaint. The hospital objected, stating the report was privileged as part of the peer review mechanism. The court disagreed and stated that the government investigation could have come from other sources and it was up to the hospital to prove that the information came from the peer review process.

The simpler it looks, the more problems it hides.

In response to ballot initiatives in California and Arizona, the National institutes of Health (NIH) empaneled 9 experts for 2-day session to evaluate various hypotheses concerning the potential use of marijuana in therapeutic settings. Five areas were defined; appetite stimulation, nausea and vomiting of anticancer therapy, analgesia, neurologic disorders and glaucoma. After 2 days, the panel came up with no recommendations and the chairman stated, "We need to get some decent research done and get closure on this." The major problem for research scientists relates to obtaining a drug supply. Even if one is granted state funding for a scientific study, then goes through the vexation of a schedule 1 Drug Enforcement Agency (DEA) clearance, and then writes a protocol approved by the Food and Drug Administration (FDA), there still remains the difficulty of obtaining legal, certified grade marijuana to do the study. Over and above a drug supply, research based upon an inhaled smoke delivery mechanism does not make sense when we are in the midst of a massive anti-tobacco campaign.

If you think you did something wrong, you're right.

An Additional embarrassment for the elected hierarchy of our American Medical Association in relation to the proposed endorsement of Sunbeam products, is that the arrangement was not managed and not even known by the officers nor the trustees. It would have been unexplainable for the officers to enter into any such a cozy deal, but even more shocking is to learn that they did not even know about it. Kirk Johnson, AMA general counsel, is heading an internal inquiry into how the agreement was forged. Obviously, management must be tightened up and functionaries apprised of the limitations in their work areas.

Without a government the nation would instantly collapse. With too much government it takes a little longer.

While Congress dithers and tinkers with the Social Security System by raising taxes and cutting benefits, hardly a baby boomer or a generation X-er has any faith that Social Security will be there for them. To seriously approach the problem, our elected officials should look south. Mexico is solving it by going private. Mexicans are now allowed to pull out of the public system and put a portion of their income (with matching employer contribution) into private accounts. To no one's surprise they are jumping at the chance with $400 million deposited when the accounts were opened, and the government anticipates another $4.7 billion by January. Along with Mexico and Great Britain, 7 Latin American countries have privatized their retirement programs.

Truth is the most valuable thing we have. Let us economize it.

Patients who enroll with Kaiser Foundation Health Plan must agree to accept the HMO's arbitration agreement to resolve malpractice disputes. Each side selects its own arbitrator and works with the other to decide on a third panel member. Kaiser's own patient protocol promises to appoint a neutral arbitrator within 60 days. In California, the Supreme Court found that Kaiser may have engaged in fraudulent conduct. Kaiser knowingly permitted widespread delays in the arbitration process, and the Court found that the mediator was neutral in 1% of the cases. The average claim takes 863 days (that's almost 2-1/2 years) to reach a hearing.

Nobody is interested in sweetness and light.

To no one's surprise, the abiding big winners in the photorefractive keratectomy excimer laser business are the lawyers. While surgeons struggle to provide good patient care with predictable outcomes at a fair cost, anyone transgressing Pillar Point Partners $250 charge for each laser use, is promptly sued. But now the federal lawyers are on the scene. Investigators for the Federal Trade Commission are prepared to recommend that the FTC file an antitrust complaint against PPP. How robust our economy would be if we could but listen to Shakespeare.

Addenda—

❖ Abraham Lincoln suffered from intermittent double vision due to hypertropia. When he told his wife Mary that he saw his mirror image with a "ghost" she believed it was a sign that he would die in office.

❖ Patients who make prolonged use of inhalers with high concentration of glucocorticoids will increase the risk of ocular hypertension or open-angle glaucoma.

❖ What distinguishes humans from lower animals is the desire to take drugs.

❖ Football combines the two worst things in America - violence and committee meetings.

Aloha and Keep the faith.—rts ■



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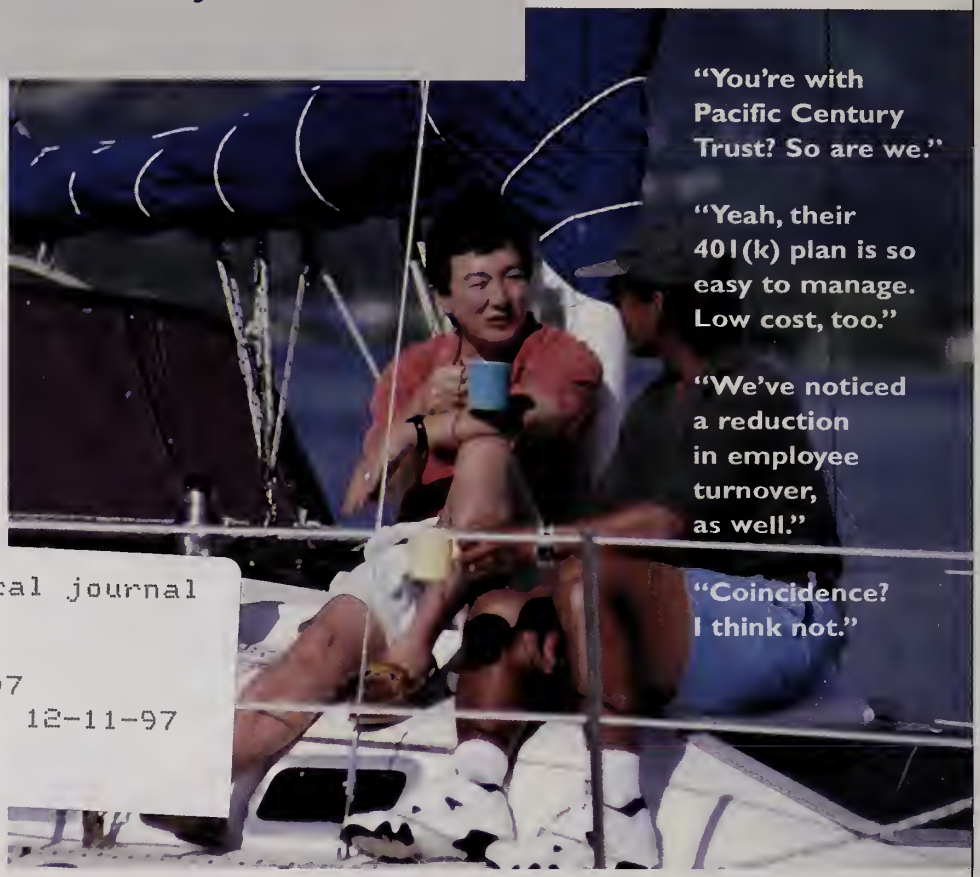
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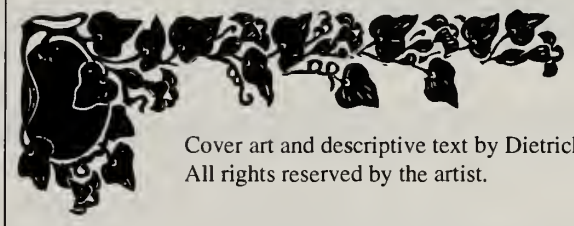
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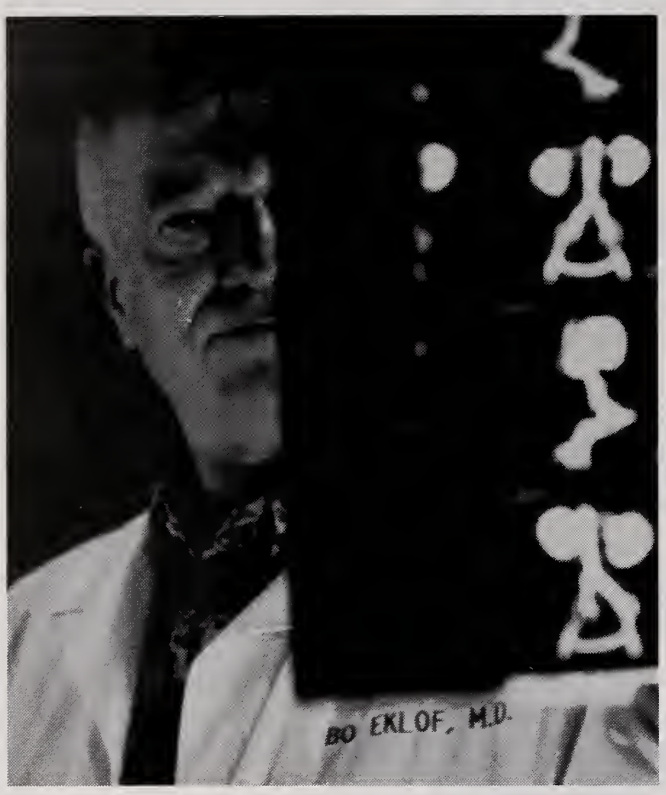
Dancer

Surrounded by a lei of Lehua blossoms, this dancer of Hawaii strikes the classic hula pose.



The Hawaii Medical Journal staff would like to wish you a joyous holiday season! We would like to express our appreciation to all the contributing writers, volunteer peer reviewers and copy editors who have assisted us throughout the year.

Join us in the quest for continued medical excellence.



Join your Straub colleagues as we strive for continuing medical excellence.

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You are invited to attend...

– Friday Noon Conference –
Luncheon
Straub Allergy Department - Case Reviews
Jeffrey C. Kam, MD
December 5, 1997, 12:30 - 1:30 p.m.
Doctors Dining Room
Learning Objectives –
At the conclusion, participants will be able to:
- Evaluate Drug Allergies.
- Understand available test and limitations to drug allergies.
- Recognize Hereditary Angioedema vs. Acquired Angioedema.

We would like to acknowledge the Educational Grant from Pfizer Labs.

– Friday Noon Conference –
All Stings Considered: First-Aid & Medical Treatment of Hawaii's Marine Injuries
Craig Thomas, MD & Susan Scott
January 9, 1998, 12:30 - 1:30 p.m.
Doctors Dining Room
Learning Objectives –
At the conclusion, participants will be able to:
- Understand the latest first aid and medical treatments of Hawaii's jellyfish stings.
- Recognize and treat ciguatera and scombroid fish poisoning.
- Understand the incidence of drowning in Hawaii.

– Friday Noon Conference –
Luncheon
Current Trends in Alzheimer's Disease and Dementia
Gary W. Steinke, MD
January 30, 1998, 12:30 - 1:30 p.m.
Doctors Dining Room
Learning Objectives –
At the conclusion, participants will be able to:
- Gain knowledge about current research as to the theory and treatment of Alzheimer's Disease.
- Understand the genetics of the dementia syndrome.
- Identify conditions that are necessary for the diagnosis of dementia of the Alzheimer's type.

We would like to acknowledge the Educational Grant from Pfizer Labs.

Please call Fran Smith at 522-4471 for more information.

Editorial

Peer Review

Norman Goldstein MD
Editor

As readers of the Journal know, our published manuscripts are peer-reviewed. Our Peer Reviewers are the authorities in many specialties of medicine as well as family and general practice.

Our readers also have diverse backgrounds and interests in many fields of medicine. While some of our manuscripts may seem specialized - such as our Special Issues on Ophthalmology, most physicians find some interest in all of our manuscripts. Highly specialized papers are usually not appropriate for our Journal, and are referred to other publications.

Many physicians spend a great deal of time reviewing the manuscripts sent to them by the Journal Editor, and also responding to the reviewers criticisms of their own papers. The Editor and Guest Editors of our Special Issues also spend countless hours, indeed days, fine-tuning the process of manuscript peer review.

As Drummond Rennie MD, Deputy Editor (West) of *JAMA* noted, peer review educates everyone concerned, and is comforting to editors and to the scientific community, who believe that attempts to make what seems to be an arbitrary process more democratic.[1]

In a publication of the Council of Biology Editors, Inc., Peer Review in Scientific Publications,[2] Rennie further states:

> "It is my bias that almost every manuscript that I have handled as an editor has been proved by the scrutiny of reviewers. Some papers have been turned from mediocre to excellent by the extraordinary efforts of dedicated reviewers. At the very least, authors have had the benefit of fresh sets of eyes, and on a few occasions, the reviewers have saved the author from public humiliation. It is also my bias that, though I have witnessed all sorts of misconduct during the review process, from flagrant plagiarism to unconscionable delay, from malicious slander to willful suppression of new ideas, editorial peer review is a process that has been more beneficial than harmful. It is difficult for me to imagine publication without such review, and if orderly review were abolished tomorrow in favor, say, of some enormous electronic bulletin board, I would become disoriented as well as unemployed."[2]

As Editor of the Journal, I have the same bias. I also have had the opportunity to review dozens of manuscripts submitted for publication, as well as an opportunity to expand my personal reading and knowledge in many fields of medicine - not only in my specialty of dermatology.

My personal mahalo to our peer reviewers. We continue to be fair, honest, and expeditious in our evaluation and publication of our manuscripts.

As the interest in our Journal has increased in the past three or four years, we have received some manuscripts for which we have had no reviewers on our panel. We must expand our Peer Review Panel. If you would like to serve the Journal as a peer reviewer in the following fields, please fax or mail your interest to the Editorial Office fax 808-528-2376.

References

1. Rennie D. Problems in peer review and fraud; cleave over to the sunnier side of doubt. In: *Balancing Act: Essays to Honor Stephen Lock, Editor BMJ.* London England; The Keynes Press; 1991:9-19.
2. Rennie, D. Peer Review in Scientific Publishing. Papers from the 1st International Congress on Peer Review in Biomedical Publications.

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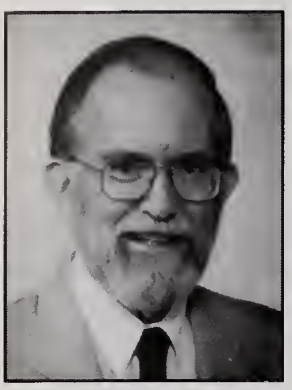
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Presidents Message

Leonard Howard MD



Leonard R. Howard MD

I am now able to speak to you from the viewpoint of riding on the back of the tiger rather than just anticipating what it might be like. We have several issues that are keeping us busy at your HMA headquarters. As for the new provider agreement with HMSA, we are actively exploring several courses of action to resolve some of the problem areas. The important point about this is that the HMA is unable to give you a recommendation as far as your signing or not signing the contract. We have made arrangements for you to obtain legal help in reviewing the contract in order to make an informed decision. Call the HMA headquarters to obtain information on this help.

I met with Mr. Robert Nickel and Dr. Richard Chung at HMSA to follow up on resolution #9 passed by the house of delegates concerning the physician incentive bonus payments. After listening to their full presentation of the program, it does not sound as bad as we had first thought. We have made arrangements for informational briefings at HMA headquarters to fully explain the program and answer your questions. We will send the issue to the HMA/HMSA Claims Review Committee for their review and recommendation.

I have completed the restructuring of the committees to put priority where our mission statement dictates. The less active committees will be turned into either subcommittees or ad hoc committees depending on their activity in the past year and how they relate to the mission. Four large umbrella committees have been established: Legislative, Communications, Peer Review, and Public Health. These committees will include in their membership the chairs of the sub and ad hoc committees assigned to them. Committee chairs will report to Council on a periodic basis, and to the Executive Committee with any priority items.

Council will meet every other month, and an expanded Executive Committee made up of the usual Executive Committee plus the five county presidents will meet on the alternate months for extended informational exchange. My goal is that every member of the HMA **knows** what their organization is doing for them. In knowledge their is strength and unity. Lack of knowledge sows dissent: thus the push for disseminated knowledge of our activities. Liberal use of fax will keep the leadership up to date with what is going on, and they will be able to brief their colleagues at the local level. All communications from the members in the front lines will be much appreciated. Together we can become the representational and advocacy force that we dreamed of in the reorganization discussions.

Poems

An Island Sort of Christmas

Sunny days with blustery wind
And magnificent surf the currents send.
Verdant mountains that twinkle at nights
Like oversized fur trees with Christmas tree lights.

But here on this island the peaks are too low
For God's winter blessing—the gift of fresh snow!
Still deep in these tropics we're fantasy locked—
There's snow on store windows and most trees are flocked.

There are Santas at malls all dripping with sweat
Wrapped in their furs like all Santas you've met.
The people are buzzing in their skins of all hues
Excited for the season that brings us good news—

Good news of a Babe and the message of peace,
And a message of hope that never will cease—
So here in Hawaii, by day and by night
It's an island sort of Christmas—and we do it up right!

Robert S. Flowers
from Paiko Peninsula

Christmas Ballet

I stopped the car for Susan to shop
At the autoteller...and out she hopped.
I glanced away while she worked the machine
To study the mountains, covered in green.

My eyes returned to the front of the bank
Where she took her cash and murmured a "thank"
For modern technology which never sleeps,
And gives back on holidays, the money it keeps.

She smiled as she turned to approach the car,
But such as the winds here in Christmas are -
They lifted her hat with its embroidered sash
And she lunged for it using the hand with the cash!

Those winds who targeted first her hat,
Seized on that handful of bills stacked so fat!
They swirled in the air as high as the roof—
Reminiscent of movements in a ***Keystone Cops*** spoof!

She looked like a puppy, snapping at flies,
Grasping for "twenties" espied by her eyes.
Leaping and jumping in a comic ballet
A scene I'll remember 'til I'm old and gray.

Pirouettes, and toe stands, arabesques, swan dives
Fouettes and entrechats, unusual for wives.
Then all of a sudden the wind stilled its force,
But the "twenties" recovered were deficient, of course!

A lone one was missing: I joined in the search,
Scouring the shrubs and the trees for a "perch"
At last we found it - But I really must say...
I'd surely have paid it...for that Christmas Ballet!

Robert S. Flowers
Honolulu, Hawaii

Thank you for Christmas Joys

For trees to climb
And words that rhyme
For pools to splash
And clay to mash
For balls to kick
And berries to pick
For piles of leaves
And Christmas Eves
For frozen ponds
And snowy fronds
For spills and thrills
On powder hills
For twinkling lights
And shiny brights
For Christmas treats
And cookies to eat
For stars in space
And Saving Grace

We thank you, God.
Amen.

Robert S. Flowers
Honolulu, Hawaii

Someone out there needs your help... volunteer

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Letter to the Editor

Jon M. Portis MD
President of the Hawaii Ophthalmological Society

Congratulations on publishing the two recent "Special Issues on Ophthalmology." I am sure these issues will be read thoroughly and even kept as a reference by your many readers. Thanks again for contributing to ophthalmology in Hawaii.

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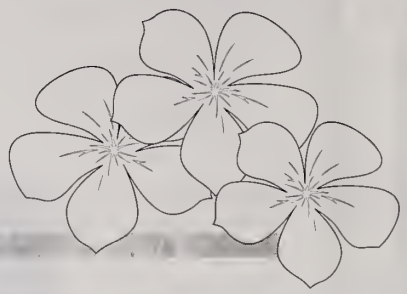
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Commentary

Humor, Humility, and a Little Bit of Hubris: Why they may be relevant to an incoming class of 60 medical school freshmen.

Irwin Schatz MD
Professor of Medicine
John A. Burns School of Medicine
University of Hawaii

President Mortimer, Dean Hammar, colleagues, incoming Class of 2001, guests. I am deeply honored to be asked to give this address and I thank you for that privilege.

Please understand that my comments are specifically directed at these young people. Anybody else can listen in if they want. And so, to the students: Aloha and welcome.

You have heard and will hear more about the symbolic significance of the white coat. I will only add that in my view the white coat was first instituted as a symbol, not only of cleanliness and neatness, but also as a great leveller, so that all medical students, residents and physicians would be considered equal in the eyes of the patient. This soon broke down, however, probably because younger-looking faculty didn't want to be confused with residents or, heaven forbid, medical students. So faculty deliberately wore longer coats, with the chief walking around with the longest coat of all, reaching his ankles. As a matter of fact, when I first came here in 1975, I altered that tradition somewhat; I find long coats bulky and uncomfortable, and therefore ordered short white coats for myself. When I wore one the first time, I was told by a colleague that I needed a longer coat because otherwise I would be mistaken for a student. I might add that I've aged considerably since then and I doubt that the confusion would exist today. Over the years, however, I've considered that remark a real compliment.

Now, let us get on the substance of this talk. Today is the start of the payoff for long and arduous pre-med studies. You got in to medical school, and I congratulate you. As a matter of fact, this represents one of the five great milestones in your life: The other four are birth, marriage, death, and the day you pay off your student loan. In the four years ahead, you will look back upon this ceremony and realize that as of this date, August 8, 1997, you began the process of forgetting everything you learned in college. You will find slipping away from your mind the carefully memorized names of Hawaiian monarchy, English romantic poets, and the body parts of frogs. Instead, a whole new array of facts and skills will be yours to assemble and to integrate; my task today will be to try to put some of your new experiences in perspective.

Normally, students who attend a commencement or convocation address remember very little of what the speaker has said; they can hardly wait to get to the post-ceremony parties and start their new lives. One hopes that there is a slight difference here today, if only because you may wonder if there is something I will say which will get you through the first hurdle you face: called the triple jump exercise. As some of you may know, this simple exam is a combination oral and written evaluation of your progress, and is really not as forbidding as it sounds or as it may have been described to you.

You will be getting all kinds of advice over the next four years; some good, some scary, and some good and scary. I don't know where mine will fit, but I offer it with the full knowledge and expectation that much of what I say will be forgotten immediately. I do want you to remember a few vital points however: they are important and are simply this: That you must approach these next four years remembering what I call the three H's: humor, humility, and a tiny bit of hubris. But before we get into these three H's, let me offer some preliminary musings on the medical school experience in general.

How does one describe the process of turning students into physicians? Very bright medical educators have been examining this issue for many years and they have come up with one conclusion: They don't know. It is really impossible to fully understand this transformation from student into physician—and yet it is as real as the nose on my face, which my children describe as copious. Somewhere between the middle of the third year and the end of the

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fourth year of school, the student becomes, in fact, a learning physician. This is a mysterious transformation characterized by a confident approach to the patient and an ability to collect, synthesize and integrate the accumulated data, although somewhat slowly. This almost magical event occurs in virtually everyone. We don't know why or how it happens, but you will all undergo it, and I continue to be amazed by it. I would suggest, however, that there is one aspect of it over which you may have some control, and that is that each time you become a physician for a patient, you remember the basic underlying processes, the basic pathophysiology, that have made that individual a patient. Unfortunately, problem-based learning, of which I am a real fan, requires that you learn much of this basic science outside of the classroom, at home or in the library. I cannot stress how important this is for you. For example, it is as vital that you understand the hemodynamics of congestive heart failure as it is for you to appreciate the community resources available for helping that patient. We must not let the pendulum swing so far back that we forget that the practice of medicine, after all, is both a science and an art. It is true that as medical technology has expanded over the past 30 years, we surely have neglected the art part; there are too many physicians who demonstrate less humanity than they should, and who have become excessively entranced by the gadgetry of medical care, to the detriment of human relationships and the patient-physician interaction. The learning of empathy—what Martin Buber has called "the I and thou" has, in great part, suffered. But you **can** develop an empathic connection with the patient, and **still** have a thorough understanding of the science of that patient's condition. Unfortunately, today that balance is sometimes out of kilter. **But** if you don't know the basic science, if you don't understand **why** a patient has complaints, then being a humane, compassionate and empathic caregiver will not be enough for your role as a physician.

It is as harmful to the patient for whom you care, for you to forget the science of his disease as it is for you to forget the art of taking care of her. This requires that you couple your humanity, compassion and empathy with a thorough understanding of the pathophysiology of the patient's disorder.

I must confess also my concern for what I feel is the excessive concentration on so-called alternative medicine, about which many of us hear so much from the media. It is easy to believe that someone has discovered a mysterious method of relieving pain, quelling anxiety, and curing disease. The fact is that **true** cures, the **real** breakthroughs, are always dependent on hard scientific achievements. The advances in public health and the extension of our lives have been due to science: antibiotics, the heart-lung machine, potent vaccines, cardiac pacemakers, new drugs, and the revolution in molecular genetics are just a few of the accomplishments derived from laboratory science and controlled clinical testing. They were not produced out of thin air by untested, non-scientific remedies marketed to an easily seduced and unsophisticated public. They have had to show their value in the only arena that really counts: the randomized, controlled clinical trial. You must now become the defenders of clinical science, requiring that all so-called cures be supported by firmly-based evidence, and not by anecdotes. Such testimonials are characterized by the fervor of their proponents, and not by the demonstration of any scientific rigor.

If, during your careers, you become firmly convinced that some form of alternative medicine works, then I challenge you to explore why. Research is never easy, and breakthroughs in medicine require hard and sometimes disappointing effort. But that's the only way we will make the necessary advances in our health care.

Now let us get back to the three H's which I mentioned earlier. Let us start with the last of these. How many of you know what the definition of hubris is? Well, I'll tell you. It is really just an exaggerated pride or self-confidence.

And how does hubris apply to you? Well, as fearful as you may be of what is to come, I can assure you that all of you, with perhaps a tiny exception, will graduate as physicians four years hence. You are an intellectual elite; you represent the top 0.5 percent of academic capability in this country. Of the thousands of medical students with whom I have had the privilege and pleasure of associating over the past 36 years, virtually all have mastered the enormous volume of facts and skills required for them to become physicians. You can do it and you will do it. I can guarantee you that. And so you are entitled to a tiny bit of hubris— not enough to distort your personalities and make you unpleasant, but sufficient so that you are aware of your capabilities. Self-confidence is important; self doubt must be abolished.

The second of these H's is humility. And even though I just told you, you are the smartest group of students extant, you are now entering an entirely new and different arena. Your teachers will expect you to perform and they will not lower their standards in any way to accommodate your potential underachievements. As accomplished as you might have been in English or history or art or chemistry, or pharmacology or genetics, your knowledge, or if I may use a term with which you may be familiar, your database, is negligible now. In fact, you are essentially a tabula rasa, a blank slate.

And so the message is clear. You must learn how to learn, and you must accept the techniques that are provided for you as vehicles for your learning. This medical school discarded the traditional lecture format several years ago. Instead, it adopted the problem-based learning system, about which you may have heard. Now, I hope you agree with some of the concepts inherent in PBL even though you may not feel that the system as it is designed is ideally suited to your particular capabilities. I can assure you that there has never been a medical student anywhere who has not thought that they could

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formulate a particular course better than their teachers. And please remember that your teachers were all students of medicine or of the basic sciences at one time in their past. They have been there; they know what you will be going through. I believe that you will find PBL a good way to learn, particularly if it is front-loaded with critically spaced and relevant lectures.

Finally, and perhaps most important; you must not ever lose your sense of humor. I mean humor in its broadest conception: not only must you be able to laugh at yourself and your colleagues, but you must also approach your work within a proper perspective. Your mindset should not be one that says I will work my tail off and I don't have time for any kind of recreation. This spells disaster. The socialization that is absolutely essential if you are to maintain some degree of a well-rounded student life is yours for the asking. You need to get out, have a few beers with your colleagues, run, surf, play tennis, and take some of the weight off your life on a reguiar and recurring basis. If you do so, you will lead a more enriched, fulfilling and successful student life.

Be prepared to laugh at yourself—remember that your colleagues and your teachers may laugh at you but they don't do so out of any feeling of derision. Laughter is a great leveller, and if we are unable to laugh at ourselves, then we are unable to laugh at the world or even understand it.

And so my message to you today really centers on five issues: first, that the equilibrium between the art and science of medicine is vital; second, that alternative medicine must be judged by the same rules that we use for traditional medical practice; and third, fourth and fifth, that a little bit of hubris, some humility, and a great deal of humor are essentials in your approach to medical student life. I wish you Godspeed, good luck and I'll see you on the wards.

Editor's Note:

This presentation was given at the White Coat Ceremony for incoming medical students on August 8, 1997. Irwin J. Schatz MD, MACP came to Hawaii from the University of Michigan to serve as Professor and Chairman of the Department of Medicine at our Medical School in July 1975, a position he held for 15 years. Dr Schatz has also served on the Editorial Board of the Journal.

Dr Schatz's 1997 presentation is far from the introduction made to my Medical School Class of '59. Our Professor of Anatomy introduced himself, then welcomed the 150 students by saying, "Gentlemen and ladies (there were 15), look to your right, now look to your left. At the end of this year, one of you will not be with us." And he was not kidding!

Only two of the three survived that first year. Today, the University of Hawaii Medical School, and most of the medical schools in the US, screen students very carefully before accepting them, and the faculty tries to keep the attrition rate "a tiny exception." Mahalo, Dr Schatz.

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The Association of Helicobacter Pylori with Intestinal Type Gastric Adenocarcinoma in a Hawaii Population*

Hausen Cheong MD, Patti Char MS, Yuan Chang MS, Stanley S. Shimoda MD

American-Japanese in Hawaii with gastric cancer have characteristics intermediate to those in Japan and the mainland United States. Japanese and mainland U.S. studies have found Helicobacter pylori is associated with intestinal type gastric adenocarcinoma. The present Hawaii study confirmed this association which is independent of Japanese race (27.6% intestinal type and 4.5% diffuse type were H. pylori positive, p=0.031, n=80).

Introduction

Recent studies have found an association between *H. pylori* and gastric neoplasm.[1,2] Ninety-five percent of gastric neoplasms are adenocarcinomas.[3] There are two subtypes of gastric adenocarcinomas, the diffuse type and the intestinal type. Intestinal type of gastric adenocarcinomas have goblet cells within the neoplastic tissue and have a better prognosis.[4] These histological subsets were studied specifically by Parsonnet, et al, who discovered that *H. pylori* was present in 89% of intestinal type cases compared with only 32% of diffuse type cases.[5,6] Recently, Parsonnet's findings were confirmed in Japan by Endo, et al, who found that 82% of 34 patients with intestinal type gastric cancer had *H. pylori* compared with 29% of 21 patients with diffuse type.[7] The purpose of this study was to verify the association between H. pylori and intestinal type gastric adenocarcinoma in a Hawaii study population that includes a sizable subpopulation of American-Japanese who are known to have an incidence of gastric cancer intermediate to the native Japanese and mainland U.S. study populations.

* Division of Gastroenterology
Department of Internal Medicine
John A. Burns School of Medicine
University of Hawaii at Manoa
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Address Reprint Request to:
Stanley S. Shimoda, M.D.,
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Methods

In a period of 16 months from January 1990 through April 1991, 80 patients with gastric adenocarcinoma were identified through the tumor registries at two Honolulu hospitals, Kaiser Permanente and Kuakini Medical Center. The registries also provided information regarding age, race and sex of these patients.

Pathology slides stained with hematoxylin and eosin (H&E) from the 80 gastric adenocarcinoma cases were examined blindly by one of two examiners (Y.C.). Each patient's set of slides were examined by light microscopy at 100x magnification over 25 fields which included both pericancerous non-neoplastic tissue and neoplastic tissue. The examiner determined the histological type (intestinal or diffuse) of each case.

The examiner also determined the absence or presence of *H. pylori.* A slide positive for *H. pylori* was defined as the presence of 5 or more curvilinear bacilli within a single 100x field. Greater magnification was used as necessary to help identify the *H. pylori* bacilli. This design was selected to reduce false positives. One slide representative of intestinalization without *H. pylori* and a second slide of *H. pylori* without intestinalization, were inserted with each set of slides as controls.

All *H. pylori* positive slides and an equal number of randomly selected *H. pylori* negative slides from the same hospital were identified. These slides were randomized and re-examined by a second blinded observer using the same technique mentioned above (H.C.).

Statistical analyses were performed using SPSS (Statistical Package for Social Sciences version 4.2).

Results

Fifty-eight of the 80 adenocarcinoma cases (73%) were of the intestinal type, while the remaining 22 cases (27%) were of the diffuse histological type. Table 1 shows that *H. pylori* was present in 16 of the 58 intestinal cases (27.6%) compared with only one of the 22 diffuse cases (4.5%), a difference which was statistically significant (Fisher's exact test: p=0.031).

A comparison of cases with and without *H. pylori* by age, gender, hospital site and Japanese race is presented in Table 2. None of the comparisons was statistically significant.

The reexamination by a second blinded examiner of 17 *H. pylori* positive cases and 17 randomly selected negative cases, stratified by hospital, showed complete agreement between the two observers. This resulted in a Cohen's kappa coefficient of 1.00 ($p < 0.001$). Controls were correctly identified 100% of the time in both the

Table 1.—The Relationship of *Helicobacter pylori* to Gastric Adenocarcinoma

	Histological Type	
	Intestinal Type # of cases (%)	Diffuse Type # of cases (%)
H. pylori Present	16 (27.6%)	1 (4.5%)
H. pylori Absent	42 (72.4%)	21 (95.5%)
Total	58 (100%)	22 (100%)

original trial and the validity trial.

Discussion

The present study found a statistically significant relationship between *H. pylori* and intestinal type gastric adenocarcinoma which is consistent with previous studies.[5-7] The study's stringent criteria for *H. pylori* positivity resulted in a prevalence less than that of previous reports. In contrast to previous studies, no significant relationship between age and *H. pylori* was found using cutoffs of 50, 55, 60, 65 and 70 years of age.[2] This result may be due to the preponderance of subjects similar in age; 88% of the study population was 60+ y.o.

This Hawaii study is unique in that it represents an American-Japanese population with a gastric cancer mortality rate that is in between those of Japan and the mainland United States. Gastric cancer is the second leading cause of cancer mortality in Hawaii among American-Japanese males with an age adjusted mortality rate of 15.9 per 100,000.[8] In Japan, the male age adjusted mortality rate is 32.8 per 100,000 whereas in the United States this mortality rate is 5.0 per 100,000. Gastric cancer is the most common cause of cancer mortality in Japan compared to being the 7th most common cause of cancer deaths in the United States.[9] Parsonnet's study was carried out on the West Coast of the United States where there is a small Japanese population whereas Endo's study in Japan was of a Japanese population. American-Japanese comprise 22% of Hawaii's population, but 76.3% of the present study's population.[10] Parsonnet's and Endo's results show similar *H. pylori* prevalence in their study population despite different Japanese populations which would suggest that *H. pylori* positivity was not associated with Japanese race. This was consistent with the present study which found that *H. pylori* positivity was not associated with Japanese race (see Table 2).

Another Hawaii study published by Nomura found the presence of anti-*H. pylori* IgG antibodies in 94% of the stored serum samples belonging to 109 American-Japanese males who developed gastric carcinoma. This case-control study showed that gastric cancer is associated with *H. pylori* in both the intestinal and diffuse subgroups. Intestinalization was found to be present in 73.0% of Nomura's population compared to 72.5% in the present study's population. This suggests that the two populations are similar. Despite having similar American-Japanese populations, it is not possible to compare Nomura's *H. pylori* antibody study to the present light microscopy study. The present study detected the presence of *H. pylori* by biopsy at the time of discovery of the cancer whereas the antibody assay for *H. pylori* only indicates exposure to this pathogen. In a stored serum study, it is possible to miss cases of *H. pylori* associated with gastric cancer if infection occurred after the serum was drawn. The average time between phlebotomy and cancer diagnosis was 13 years in the stored serum study. Another problem is that antibody titers may also become negative if *H. pylori* disappeared more than 1 year prior to sampling. On the other hand, in a light microscopy study, it is possible to miss cases of *H. pylori* associated with cancer where the pathogen disappeared after the cancer developed or where an inadequate stain is used. The neoplastic tissue, especially of the diffuse type, may present an environment hostile to *H. pylori* growth.[1]

Table 2.—*Helocobacter pylori* and Various Characteristics Among Gastric Adenocarcinoma Cases

Characteristic	H. pylori Present	H. pylori Absent	Odds Ratio	95% Confidence Limit
Histology				
Intestinal type	16	42		
Diffuse type*	1	21	8.00	1.07, 351
Hospital				
Kuakini	16	50		
Kaiser*	1	13	4.16	0.53, 187
Age (years)				
>60	13	57		
≤60*	4	6	0.34	0.07, 1.92
Gender				
female	8	25		
male*	9	38	1.35	0.40, 4.50
Race				
Japanese	14	47		
Non-Japanese*	3	16	1.59	0.37, 9.67

* = Referent Group

In summary, this Hawaii study confirms the relationship between *H. pylori* and intestinal type gastric adenocarcinoma as found in studies in Japan and the mainland United States. The association between *H. pylori* and intestinal type adenocarcinoma was not affected by age, gender, institution, or Japanese race.

Acknowledgments

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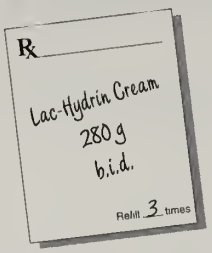
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2. Patients should minimize or avoid use of this product on areas of the skin that may be exposed to natural or artificial sunlight, including the face. If sun exposure is unavoidable, clothing should be worn to protect the skin.
3. This medication may cause stinging or burning when applied to skin with fissures, erosions, or abrasions (for example, after shaving the legs).
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ADVERSE REACTIONS: In controlled clinical trials of patients with ichthyosis vulgaris, the most frequent adverse reactions in patients treated with Lac-Hydrin Cream were rash (including erythema and irritation) and burning/stinging. Each was reported in approximately 10-15% of patients. In addition, itching was reported in approximately 5% of patients.

In controlled clinical trials of patients with xerosis, the most frequent adverse reactions in patients treated with Lac-Hydrin Cream were transient burning, in about 3% of patients, stinging, dry skin and rash, each reported in approximately 2% of patients.

DOSAGE AND ADMINISTRATION: Apply to the affected areas and rub in thoroughly. Use twice daily or as directed by a physician.

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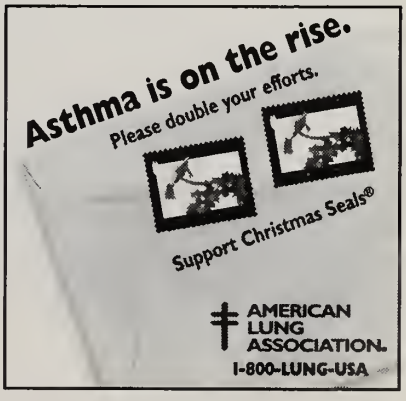
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Newborn Hearing Screening in Hawaii

Jean L. Johnson DrPH*, Nancy L. Kuntz MD**, Calvin C.J. Sia MD***, Karl R. White PhD****, Roma L. Johnson MA*****

In 1989, Surgeon General C. Everett Koop challenged parents, physicians, state agency staff, and researchers to work together to find better ways to identify young children with hearing impairments. He urged that by the year 2000 all children with significant hearing impairments be identified before 12 months of age[1,2] Today, Hawaii is screening more than 90% of its births and is on the threshold of achieving this Year 2000 Health Goal. Only a handful of other states, e.g., Rhode Island, Utah, Colorado, Iowa, and Wyoming, have made substantial strides toward this goal, and only Rhode Island has implemented a statewide program similar to Hawaii's.

This Year 2000 Goal was set because of the failure of the nation to improve the age of early identification of early loss, despite decades of efforts.[3] Prior to 1993, the average age of identification of a child with severe-to-profound hearing loss was approximately 2-1/2 years, with significant mild-moderate hearing loss not identified until after 5-6 years of age.[4,5] A 1987 study in Hawaii found that the average age of identification for severe-to-profound hearing loss ranged from 2.8 months to 4.4 years, depending on where the child lived and the family's health insurance coverage.[6]

Why Early Identification is Important

While the devastating effect of severe-to-profound hearing loss has long been recognized,[7,8] only recently have the negative consequences of mild-to-moderate bilateral or unilateral hearing loss become evident.[3] Emerging brain research on the critical importance of auditory competence during the first three years of life underscores the importance of identifying any hearing loss as early in life as possible to assure that the acquisition of communication skills is not delayed.[9-11] Obviously the greatest emotional and functional impact of hearing disability is on the newborn and the family.

Moreover, parents have been concerned over the delay in identifying their children's hearing loss. As reported in a 1995 study, few parents of hearing impaired children were satisfied with the age at which their child's impairment had been confirmed. More than three-fourths of the parents surveyed would have welcomed a neonatal hearing screening program.[12]

Not only does undiagnosed hearing loss in infants have negative consequences for the family, the community also suffers. An analysis for the United States Department of Education concluded that the cost for special education services in a self-contained classroom is approximately three times the cost of a regular classroom. If a child requires a residential program, the cost is approximately ten times more per year.[13] Identifying hearing disability before 12 months of age, providing the children with appropriate medical and audiological management, and enrolling them in early intervention programs, substantially reduces the need for extensive special education services.[14]

In recognition of the importance of the early detection of hearing loss, and with the increasing availability of reliable technology,[15-18] these and many other articles over the past two years, both in Europe and the United States, recommend implementation of universal newborn hearing screening.[8,19-21] That it is now both possible and feasible to lower the age of identification of hearing loss is now widely recognized.[22-25] Articles now address the importance of the issues of legal liability and quality assurance.[26]

Hawaii Begins Reaching for the Goal

With the support of the Hawaii Chapter of the American Academy of Pediatrics and the Hawaii Speech-Language-Hearing Association, legislation was introduced in 1990 to mandate universal newborn hearing screening in Hawaii. In May 1990, Governor Waihee signed Act 85 (HRS §321.361-363) into law in celebration of Better Speech and Hearing Month.[27]

The act assigns responsibility to the Department of Health (DOH) in four areas:

1) develop methodology for identification and intervention;
2) develop guidelines for screening, identification, diagnosis, and monitoring;
3) develop a plan to involve parents in the medical and educational follow-up and management of the hearing impairment; and
4) develop a plan for the collection of data and program evaluation.

Hawaii's legislation does not mandate a particular methodology or technology. The DOH has specifically elected not to adopt rules for the implementation of the program in order to enable the program

*Zero-to-Three Hawaii Project
**Family Health Services Division
***Carnegie Project
****National Center for Hearing Assessment & Management, Utah State University
*****Newborn Hearing Screening Program

to be responsive to any new technology or methodology consistent with the goal of early identification of hearing loss.

With the support of the Hawaii Chapter of the American Academy of Pediatrics and the Pediatric Committee of Kapiolani Medical Center for Women and Children (KMCWC), newborn hearing screening began in 1992, using otoacoustic emissions screening. Kaiser Medical Center began screening in April 1992, utilizing unilateral automated auditory brain stem (ABR) screening. Screening was expanded to Maui Memorial Hospital (MMH) in February 1993. The Queens Medical Center began screening in July 1993. Tripler Army Medical Center implemented screening in the Spring 1996.

Currently, all but one of the smaller birthing facilities have been providing universal newborn hearing screening. Kona Community Hospital is now the only hospital in the state not providing newborn hearing screening. Thus, hearing screening is now available to 96% of all newborns in the state. With the exception of Kaiser Medical Center, all hospitals use bilateral otoacoustic emissions as the method of screening.

Otoacoustic omissions (OAEs) are acoustic responses associated with the normal hearing process. OAEs are produced in the inner ear and can be measured with a low-noise microphone placed in the ear canal. These responses are commonly elicited by the use of brief acoustic stimuli such as clicks. Research has demonstrated the practicality of using OAEs to identify hearing loss in newborns.[3]

The use of this technology for newborn hearing screening has the following advantages: 1) simplicity: no advanced technical training is required for administration; 2) rapidity: detection of OAEs can be achieved in less than 5 minutes for both ears; 3) noninvasiveness: the acoustic probe is placed into the external ear canal using an impedance probe protector without support; 4) objectivity: a visual record of cochlear response is provided for future reference; and 5) sensitivity: this technique is sensitive to hearing loss down to 25 decibel HL.

As Table 1 shows, the percentage of children screened since the beginning of the program has been progressively increasing.

Table 1.—Percentage of Newborns Screened by Year in Hawaii's Newborn Hearing Screening Program

Year	Percentage
1992	19%
1993	44%
1994	55%
1995	65%
1996	79%
1997	95%

Operation of the Screening Program

Since its inception, the screening program has been an example of private-public partnership. The DOH provides seed money in the form of equipment, supplies, technical support, training, and (in the early years) personnel to do the screening. The DOH began with the larger hospitals, gradually transferring support to the smaller birthing centers as the larger hospitals could assume the cost of the program. As hospitals begin receiving revenues from billing for the services, each hospital gradually assumes the cost of direct screening operations. The data-tracking system is operated by the DOH. The DOH continues to provide training, technical support, and quality assurance.

Hospitals use a variety of personnel for screening. Larger facilities such as KMCWC, MMH, Queens, and Tripler use full-time, dedicated screeners. Smaller facilities rely on nursing staff (e.g., Wilcox Memorial Hospital) or volunteers (e.g., Hilo Community Hospital).

Infants are generally screened within the newborn nursery, or, if the nursery's noise-level is unacceptable, in an adjacent room. Best results are obtained after the first 24 hours following the birth. If an initial response is not obtained, several efforts are made to secure a response. If a response still cannot be secured, the infant is scheduled to return for a rescreen as soon as possible. If responses cannot be obtained during the second screening, the infant is referred for a diagnostic ABR evaluation.

Since newborn hearing screening is standard-practice-of-care in each hospital, parental permission is not required. Parents and pediatricians are informed whenever responses are not obtained from the newborn. For those newborns for whom screening cannot be completed prior to discharge, parents are notified that the child was not screened and parents are offered the opportunity to return for out-patient screening.

Intervention Services

A universal screening program is obviously only the first aspect of the system of care necessary to reduce the negative consequences of congenital hearing loss.[5,28] Whenever responses are not obtained during the second screening (anywhere in the state), a referral is made to the Newborn Hearing Screening Program for assistance in scheduling the ABR. The services provided to the child and family are tracked through a data management system.

If the diagnostic evaluation identifies the child as having a significant hearing loss, a referral is immediately made to the Hawaii Keiki Information Services System (H-KISS) for assignment of a care coordinator through the Zero-to-Three Hawaii Project. The care coordinator, working closely with the family and in collaboration with pediatrician or the child's medical home, arranges for appropriate intervention services. A significant hearing loss makes a child eligible for services under Part H of the Individuals with Disabilities Education Act (IDEA).

The care coordinator works with the family to assure that all the diagnostic and necessary medical services are obtained. Fitting of amplification at the earliest possible age is the highest priority. Additionally, all other services needed for the optimal habilitation of the child are made available. These services include auditory training, speech-language therapy, child development services, parent training and counseling, sign-language instruction, and other eligible services needed by the family. Every effort is made to provide the family with information and support for a full range of options for communication and early education.

Services continue until the child reaches the age of three. Transition planning occurs between the age of 2-1/2 and 3 years to determine the most appropriate services after the age of three. Many children at the age of three have been successfully transitioned into

Table 2.—Age of Identification and Amplification of Newborns in Hawaii

Birth Year	Average Age Identified	Average Age Aided
1987*	42 months	50 months
1991	17 months	19 months
1992	12 months	16 months
1993	6 months	11 months
1994	10 months	16 months
1995	6 months	12 months
1996	3 months	7 months

*For births for previous five years where complete information could be obtained.

community preschool programs with supportive services. Others become eligible for IDEA services through the Department of Education.

Results for Hawaii

The results for Hawaii unequivocally demonstrate that newborns can be effectively screened, with drastic reductions in the age of identification and the time of amplification. The data for the past decade are displayed in Table 2. The table shows that many of the children are being aided prior to six months of age. Unfortunately, speedy provision of amplification remains a problem, largely because of the policies of some third-party insurers. The expedited provision of amplification requires increased attention.

Exact cost estimates are elusive, but the range within the state is from $30-50 per child screened. These ranges are consistent with national averages. Hawaii's cost range compares well, being the least expensive per case identified of any newborn screening program. Table 3 compares the cost of identifying one child with significant permanent hearing loss with the cost of identifying children with hypothyroid, PKU, cystic fibrosis, and HGB. As the table shows, the cost per child for hearing screening is several times larger than tests for the other conditions, but the cost is several times less for each confirmed diagnosis.

Related Events

Increasing attention at the national level has focused on universal hearing screening since Hawaii passed its legislation. In March 1993, a Consensus Panel of the National Institutes of Health concluded that all infants should be screened for hearing impairment with a test that measures for otoacoustic emissions.[29] NIH also recommended that all infants with a significant hearing loss be identified by three months of age, with intervention beginning prior to six months of age.

Other organizations have urged stepped-up identification of hearing loss in children. In 1994, the American Academy of Pediatrics, along with four other professional organizations, drafted a joint position statement calling for the early detection of hearing loss.[30] Representative James Walsh (R-NY) introduced the Infant Hearing Screening/Hearing Loss Testing Act in the 104th Congress. The legislation would mandate hearing testing for all newborns, requiring private insurance companies and Medicaid to cover the cost of the screening. Hawaii was the first state to pass legislation; now Connecticut has become the fifth state in the nation to mandate newborn hearing screening.

Table 3.—Comparative Cost of Identification of Various Conditions in Newborn Screening Programs (31)

	Sensorineural Hearing Loss	Hypothyroid	PKU	Cystic Fibrosis	HGB
Frequency per 100,00 births	564 (1) 376 (2)	25	7	50	13
Average age of diagnosis if unscreened (in months)	30	3 - 12	3 - 12	42	3 - 36
Cost of screen per child	$25	$3	$3	$3	$3
Cost per confirmed diagnosis	$4,440 (1) $6,650 (2)	$10,800	$40,500	$6,000	$23,100

(1) Unilateral
(2) Bilateral

Additionally, the Maternal and Child Health Bureau funded a grant in 1996 to encourage states to implement universal newborn hearing screening programs. The Centers for Disease Control, in collaboration with the Office of Special Education and Rehabilitative Services and the Maternal and Child Health Bureau, is funding a new study to explore various models of statewide tracking and data management for newborn hearing screening programs.

Case Studies

Three case studies from Hawaii demonstrate the critical importance of relying on objective, universal screening versus subjective pediatric and family surveillance for early identification.

Case 1

When a newborn was identified by the screening program and was undergoing diagnostic evaluation, the audiologist, observing the auditory behaviors and speech patterns of the infant's three-year-old sister, was alerted to the possibility of hearing loss in the sister. Both children were found to have a moderate-to-profound bilateral hearing loss. Neither the girl's parents nor her pediatrician had raised the possibility that she might have a hearing loss. The younger brother is now in preschool with age-appropriate communication skills. Sadly, the older sister, remains in a special education class with delayed receptive and expressive language skills.

In at least two other families, older siblings with hearing loss have been identified as a result of the referral of the newborn for diagnostic evaluation after the infants failed the hospital screening. In one family, two older siblings were identified with the same pattern of hearing loss as the newborn.

Case 2

This child, born at one of the birthing centers providing newborn hearing screening, was not screened prior to discharge. A letter from the hospital's audiologist informed the parents that screening was not done, but was available on an out-patient basis. A copy of the letter was sent to the child's pediatrician. The letter encouraged the

parents to bring the baby in for screening, but they chose not to do so. When this child was 2 1/2, the family began to suspect that the child might have a hearing loss. They consulted the pediatrician at the age of 2 years nine months. This child was found to have a bilateral severe-to-profound hearing loss with severely delayed speech and language development. Obviously the child would have benefited from early identification. The parent regretfully remembered vividly the earlier notification about the availability of the screening service.

Case 3

A child failed the initial hospital screening and was scheduled to return. Despite notification letters to the parents and pediatrician, the child was not brought in for the second screening. At the age of 11 months, the pediatrician became suspicious about the child's hearing and made a referral for a diagnostic audiological evaluation. The child was found to have a severe bilateral hearing loss.

Summary

Hawaii has been a pioneer and national leader in implementing universal newborn hearing screening. In fact, Hawaii is one of only two states (Rhode Island is the other) which have a statewide newborn hearing screening program in which 95% or more of all newborns are screened. Hawaii is the best example of a truly integrated system of services to provide effective intervention for all infants and toddlers who are identified as having a hearing loss.

The success of the newborn hearing screening program is measurable in two ways: 1) **all available information indicates that not a single infant with hearing loss has been missed by the screening process and not a single infant has been misdiagnosed as having a hearing loss**; and 2) many of the children identified with hearing loss by the newborn hearing screening program have transitioned out of the early intervention program with age-appropriate developmental and communication skills.

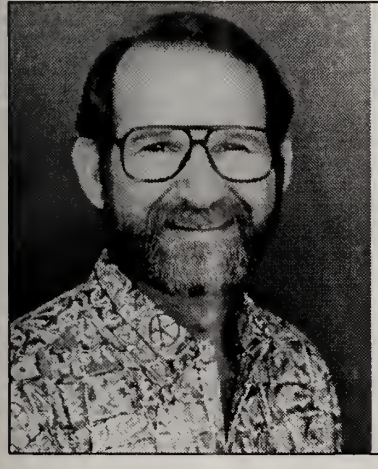
The success of Hawaii's program is a tribute to the enthusiastic support and collaboration of legislators, pediatricians, hospital staff, and DOH personnel.

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News and Notes Henry N. Yokoyama MD

Life in These Parts

A Father's Letter to Santa

My 5-year-old boy scribbled out his Christmas list. It's there by the fire place. The Coke™ and M&M's™ are from him, in case you're hungry. You know 5-year-olds these days. The Cheezits™ are from me.

Santa, if you don't mind. I thought I'd go ahead and leave my list, too. It's long, but do what you can.

It's all I want for Christmas.

Christmas List from His Father

Santa, let my little boy grow up still believing that he has the funniest dad in the neighborhood.

Give him many close friends, both boys and girls. May they fill his days with adventure, security and dirty fingernails.

Leave his mom and me some magic dust that will keep him just the size he is now. We'd just as soon he stayed 5-years-old and 3 feet, four inches.

If he must grow up, make sure he still wants to sit on my lap at bedtime and read "*The Frog and the Toad.*"

If you can help it, Santa, never let him be sent into war. His mother and I love our country, but we love our 5-year-old boy more.

While you're at it, give our world leaders a copy of "*The Killer Angels*," Michael Shaara's retelling of the Battle of Gettysburg. May it remind them that too many moms and dads have wept at Christmas for soldiers who died in battles that needn't have been fought.

Let our house always be filled with slamming doors and toilet seats, which are official sounds of little boys.

Break it to him gently, Santa, that his dad won't always be able to carry him to bed at night or brush his teeth for him. Teach him courage in the face of such change.

Let him understand that no matter how nice you are to everyone, the world will sometimes break your heart. As you know, Santa, a child's feelings are fragile as moth wings.

Let him become a piano player, a soccer star or a priest. Or all three. Anything but a tax-and-spend Democrat.

Give him a hunger for books, music and geography. May he be the first kid in kindergarten to be able to find Madagascar on a map.

The kid's a born artist, Santa, so send more crayons. May our kitchen window and refrigerator doors be ever plastered with his sketches of surreal rainbows and horses with big ears.

Through the years, steer him oh so carefully to that little girl destined to be his bride. Let his mother and me still be around when he walks her down the aisle. If there's a just God, let her daddy be obscenely rich.

Grant him a heart that will cherish what his parents did right and forgive us for the mistakes we surely will have made over a lifetime of raising him.

Let him not hold it against us that he was born with my chin and his mother's ears. Time will teach him that these are God's ways of girding him for life's adversities.

Hold him steady on the day that he learns the truth about you and the Easter Bunny. May he take the news better than I did.

While you're flying around the heavens, Santa, make sure God has heard our prayer for this child: Lead my little boy not into temptation; deliver him from evil.

Be careful out there, Santa. And close the flue on your way up.

(Ed. This touching letter was included with a group gift from the Kuakini Radiology Group: Howard Arimoto, Donald Ikeda, Donn Kumasaki, Gordon Ng, David Sakuda, Ted Watanabe, James Yamasaki. Thanks fellars).

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Physician Moves

August:

OB Gyn man ***Richard Ikehara*** joined the Central Medical Clinic at 321 N. Kuakini St., Ste 201. Plastic surgeon ***Eugene Smith*** opened his practice at 3 locations: St. Francis Medical Plaza-West, Ste. 100; St. Francis Medical Office Bldg., Ste. 301.; Plastic Surgery Center of the Pacific at 677 Ala Moana Blvd., Ste. 1011.

September:

Anesthesiologist ***Derek Ken Matsushige*** joined the Physician's Anesthesia Service Inc. at 321 N. Kuakini St., Ste. 306.

City physician ***John Hall*** resigned Sept. 10, three months after charging that Mayor Jeremy Harris' administration catered to the United Public Workers' head Gary Rodrigues by not cracking down on drug use by union workers.

Personal Glimpses

David Lee Pang, 86, still in active practice after 58 years, spends 6 hours a day at his office. David says, "I enjoy working. It is my hobby. Instead of playing golf, I come here to talk to my patients. The day goes by fast. As long as I'm healthy and my mind is clear, I'm going to keep practicing."

Osamu Fukuyama, 48, came to the U.S. in 1968 when student protesters with Molotov cocktails took over the prestigious Tokyo University where he attended. They were protesting the Vietnam War and the U.S. military presence in Japan. Osamu attended UC-Berkeley and UH School of Medicine. "Medicine has changed drastically in the last 20 years, but it's still a very honorable profession. There is meaning in the things I do every day. It's given me a lot of satisfaction."

Dr Fitness Health Tips

Problem: Golfer with wide feet and tight shoes.
Solution: Put on shoes. Mark with ball point pen the widest point of shoe. Take off shoe. With sharp knife make an "X" through the shoe about the size of a dime. This will relieve pressure on the first bone of your foot.
Second solution: Buy the next larger size shoe and a heel spacer for the shoe.

Problem: Surfer has hamstring strain.
Solution: There is no quick cure. Simple hamstring strain usually takes 3 - 6 weeks to heal. If in the middle of the thigh, strain heals faster. If very high or very low near the knee, the strain takes longer.

Problem: Getting Back in Shape.
Solution: A good rule is to take at least one full month of gradual exercise for every year you have been out of shape. If you want to try to hurry, do frequent light workouts in different sports everyday. Example: 15 - 20 minutes light weight lifting 4 - 5x/wk; jogging 1 mile 3 x wk; daily light general stretching and one sports game like tennis.

Miscellany

An elderly couple died in a car accident. They arrived in Heaven where St. Peter took them on a tour of the premises. They were shown a palatial home with swimming pool, next to a 18 hole golf course and in back were 3 enclosed tennis courts. "Why, we can't afford all this," said the husband. St. Peter: "Here in heaven, everything is free. Of course you can afford it."

They were shown the dining area where spread before them was a feast with steaks, roasts, rich desserts, buttered rolls, etc. "Shouldn't we be watching our cholesterol levels?" asked the husband. St. Peter assured him, "You are now in Heaven. No one dies from heart problems."

The husband turned to his wife, "Honey! If it weren't for your oat bran muffins, we could have been here 10 years ago."

While doing a locum for a doctor who did a lot of dental pre-op exams, I noted a concealed look of disgust from the receptionist as I headed in for an easy dental pre-op.

"This one is an exotic dancer," she warned. Knowing this didn't really diminish the shock of seeing the all-but-naked young woman perched on the table with only a G-string.

I proceeded to take a BP, listen to all 18 lobes of her lungs and tried to determine if the muffled heart sounds were due to the mass of silicone or the nervous adrenaline rushing through my ears.

When I'd completed the brief exam, she said, "Doctor, I have an embarrassing problem that bothers me in my line of work. If you could check, I think I have a hemorrhoid."

In a flash, she deftly peeled off her G-string and with one felt swoop tossed it right at me, striking me on the side of the head where it promptly hooked onto my ear before falling to my shoulder!

As it rested there unceremoniously, she gasped and, with one hand to her mouth and the other reaching towards me, said, "Oh, I'm so sorry, it's just a habit."

To this day I know I hold the record for the locum with the reddest face after seeing a patient.

Dr David Hepburn (Stitches Sept. '97)

Potpurri

The huge ship was barreling through the waters one inky night (in the days before radar) and you can imagine the captain's indignation when he saw up ahead other lights coming close.

Cholerically, he ordered the message sent ahead, "Veer off, you blasted idiot. This is a battle ship coming toward you."

And almost at once a message came back, "Well, think it over. This is a lighthouse coming toward you."

The patient sat in the dentist's chair; head far back and mouth open. The dentist was about to insert his instrument when the patient's hand seized the dentist's testicle in a firm grip.

Smiling beautifically the patient said, "Now doctor, we're not going to hurt each other, are we?"

A veteran air pilot was undergoing a complete physical exam in order to qualify for a new type commercial aircraft.

The veteran passed with flying colors and the doctor said, "I must ask you one more psychiatric question. Tell me, sir, how long has it been since you had a successful sexual experience with a young lady?"

The pilot's eyes narrowed and he finally said, "I would say it was about 1955."

The doctor was startled, "That long ago? Isn't that unusual?"

The pilot look at his wrist watch, "That's not so long ago. It's just 11:05 now."

(Excerpts from Asimov Laughs Again)

Classified Notices

To place a classified notice:

HMA members.—Please send a signed and typewritten ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in HMJ as space is available.

Nonmembers.—Please call 536-7702 for a nonmember form. Rates are $1.50 a word with a minimum of 20 words or $30. Not commissionable. Payment must accompany written order.

Office Space

Pearlridge Office Center.—800 sq. ft. available Tuesday and Friday mornings. Wednesday and Thursday afternoons. Call 487-1559.

Interstate Bldg.—1314 S. King St., 400 sq. ft. Partitioned into 3 rooms: Waiting, Accounting/Receptionist & Executive. Perfect for single practitioner. Used by Psychiatrist & Psychologist. Ready to move in. Only $92,000 (LH). Some furniture avail. **Fong Properties** 593-9776.

Locum Tenens

Take an Afternoon Off.—While your office stays open. Part-time primary care office coverage on a regular or occasional basis by longtime Honolulu physician. Contact John Wichmann-Walczak MD at 739-9483 or 524-2575.

Announcement

General Practice Opened.—In Kapahulu area by 20-year veteran of St. Francis ER. New patients welcomed; free parking; convenient hours; house calls (downtown Honolulu-Aina Haina). John Wichmann-Walczak MD at 750 Palani Avenue, Honolulu 96816. 739-9483.

Primary Care Physician.—Excellent opportunity to establish practice on Maui. Ideal candidate will be self-motivated and have excellent clinical and interpersonal skills. Attractive cost sharing arrangement. Fax C.V. to (808) 877-3146.

Office Relocation.—Dr. Ronald Peroff, Queen's POB I, 1380 Lusitana Street, Suite 910, Honolulu, HI 96813. New phone 599-NOSE (6673), Fax 599-4605.

Misc.

Latex Glove Relief.—Latex glove sensitivity protectant spray, immediate reduction of Type I irritation from latex gloves, duration 100+ hand washes/4/8/16 hrs. Free evaluation sample to USA/APO address physicians. **Limited time, 1 sample per office.** Other products: Scalp Itch Reducer gel and Skin Itch Reducer gel, soothing relief, duration varies from 8-48 hrs, results vary per individual, Sahara Cosmetics, (808) 735-8081, PO Box 10869, Honolulu, Hawaii 96816-0869, USA, leave name on answering machine or send letterhead or business card to above address.

Business Opportunity

Veteran Certified Petroleum Geologist.—Wishes to team up with oil and gas investment capital finder. Excellent remuneration. (614) 453-9231 or fax (614) 450-7507.

For Sale

Misc for Sale.—Desk 60" x 30" $50.; Credenza 71" x 18" $100, Xerox Model 5309, 1 yr old , $525. Ask for Nelson 536-7702.

Give-A-Way.—Burroughs Pegboard accounting system. Call Jean Frissell 536-0779.

Wanted

Wanted.—Partner to join booming practice in paradise. Must have solid clinical background. BC/BP occupational physician preferred but all qualified primary care applicants will be considered. This is an exceptional "no money down" opportunity for the entrepreneurial minded practitioner. Call Dr. Scott McCaffrey at (808) 676-5331 for more details.



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Compiled by Marlene M. Ah Heong, Carolyn S.H. Ching and Christine Sato of the Hawaii Medical library

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